MARCH
1952

fueloil & oil heat

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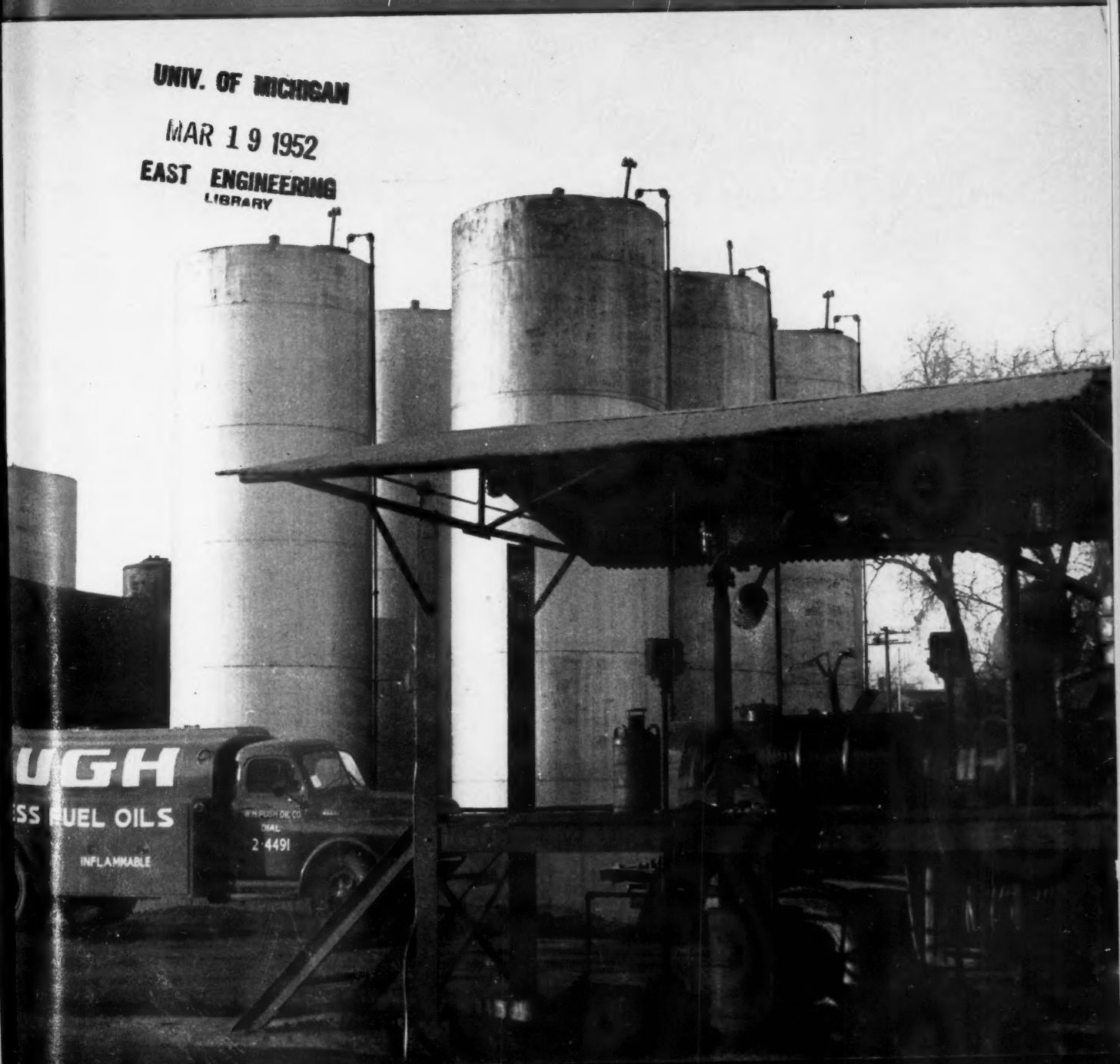
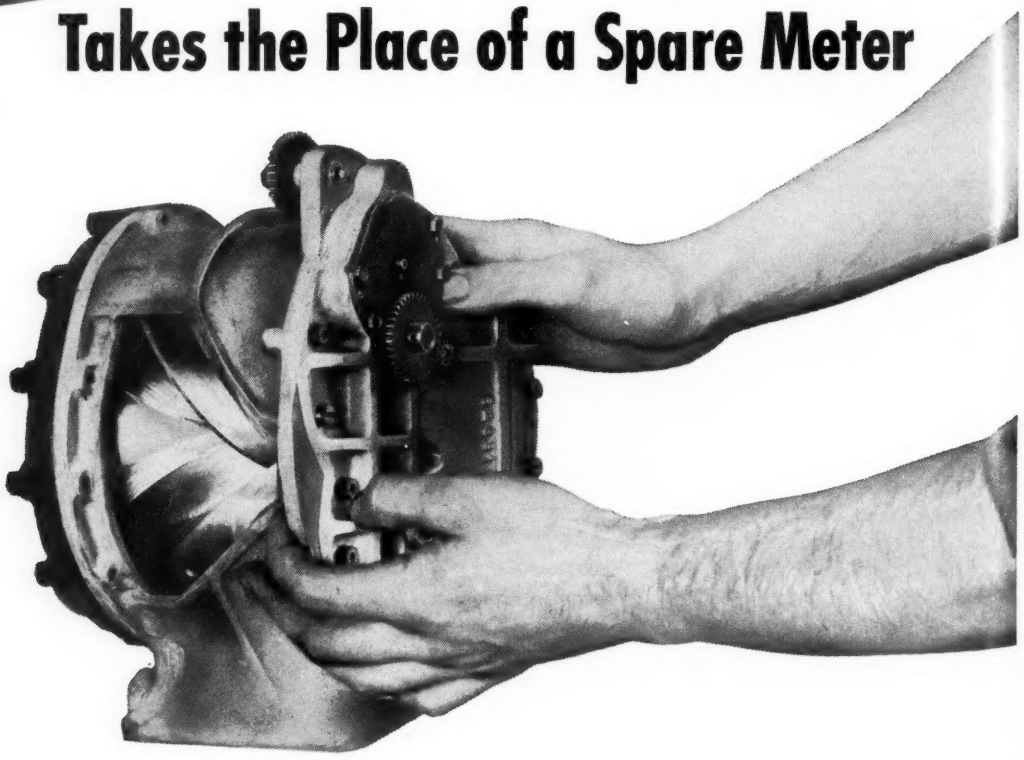


THIS *Replaceable* MEASURING UNIT
Takes the Place of a Spare Meter



—BRODIE *BiRotor* Readily Replaceable Measuring Unit

- BiRotor Measuring unit is completely interchangeable and readily replaceable.
- Eliminates need and extra cost of a spare meter.
- Permits quick change-over without disturbing existing lines or connections.
- This is but one of the many important reasons why Brodie BiRotor is being adopted as standard by so many oil marketers. Other features include: *Welded all-steel meter housing; precision dry adjustment; positive displacement with true rotary operation; just two moving parts in measuring chamber.* When you're looking into meters, *it's what's inside that counts.* Standardize on Brodie BiRotor—the meter with the *replaceable measuring unit.*

BRODIE ALL-STEEL BiRotor TRUE-ROTARY METERS

RALPH N. BRODIE CO., INC. • 61st & LOWELL STREETS, OAKLAND 8, CALIFORNIA, U.S.A.

Division Offices: 550 SO. COLUMBUS AVE., MT. VERNON, N. Y. • 59 E. VAN BUREN, CHICAGO 5, ILL. • 302 SO. PEARL STREET, DALLAS, TEXAS
221 9th AVE. N., SEATTLE 9, WASH. • 5401 E. SHEILA STREET, LOS ANGELES 22, CALIF. • *REPRESENTATIVES AND STOCKS IN ALL PRINCIPAL CITIES*

MARCH fueloil & oilheat 1952

VOLUME 11 NUMBER 3

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MEMBER CCA

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ENTERED AS SECOND CLASS MATTER AT THE POST OFFICE AT BALTIMORE, MD.

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Among other things . . .

In these days when the whole industry is recognizing the need for manpower education, IBR is doing an outstanding job with its schools in a number of cities. Norman Radder, who heads the P&H Industries Bureau, tells a lot about them in the lead feature.

An entirely new approach to the problems of fueloil costs and margins is developed in the next article. The author says he'd like to start an argument. Some fueloil marketers are hurt and others blessed under any variety of margin policy unless its very flexible.

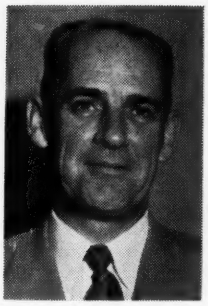
The sidewalk sand story was discovered up in Wisconsin; mostly it exemplifies alert merchandising by an outfit that is extra strong for its town size.

Then a number of good oilheating employees will be getting odd checks from the Idea Contest; all for this time.

Names in the News

J. A. Madden has been appointed sales manager, Maid-O'-Mist, Inc., Chicago, Ill. Madden has had wide experience in the heating and refrigeration fields. For eleven years he was with Servel, Inc., serving as Eastern District sales manager in Philadelphia.

James H. Lahey has been appointed to the newly-created post of assistant sales manager, Oil Hydraulics Div., Webster Electric Co., Racine, Wis. and *George F. Brinkerhuff* has been appointed field representative for Webster's new Wholesaler Service Division. Lahey, who for the past two years was a company sales representative, expects



Lahey

Brinkerhuff

to maintain contact with the heating field, although his new duties managing the company's line of hydraulic pumps will command much of his time. Brinkerhuff also expects to maintain his contact with the wholesale field while working out of the Webster Electric main office in Racine.

Harry M. Harris was recently appointed sales representative for L. J. Mueller Furnace Co., Milwaukee, Wis., for whom he will cover parts of Missouri, Nebraska, Iowa, Kansas and Oklahoma. He will work out of Marion, Kans. Harris has been associated with the heating industry for more than seven years and has a diversified background in all phases of heating and air conditioning equipment.

J. B. O'Donnell and *M. D. Puckett* have been appointed district sales managers by Century Engineering Corp., Cedar Rapids, Ia. O'Donnell, who succeeds Ray Considine recently appointed Illinois district sales manager, will administrate sales in Wisconsin and Michigan. Puckett is in charge of Century sales in Kentucky, Tennessee and southern Indiana.

Oliver W. Dobson, who operates the Oliver W. Dobson Co. as a manufacturers' representative, has moved his office to 94-46—212th St., Queens Village, N. Y. Dobson has been representing Automatic Devices Co. and General Filters Corp. for some time and more recently added the products of Downs Eng. Co., The Tankit Co. and Baseline Mfg. Co.

John K. Farrar has been appointed acting sales manager, Mor-Sun Furnace Div., Morrison Steel Products, Buffalo, N. Y., succeeding Gene Brown who resigned on February 11.

There is only ONE

TRADE MARK REGISTERED

Draft-O-Stat

BAROMETRIC DRAFT CONTROL

AND HOTSTREAM MAKES IT!

INSIST ON Draft-O-Stat FOR BEST RESULTS ON EVERY OIL BURNER INSTALLATION

New Model "B" (illustrated) now available in 6, 7, 8, 9, 10 and 12 inch sizes. Write for Bulletin.

THE HOTSTREAM HEATER CO.

6925 QUINCY AVENUE • CLEVELAND 4, OHIO

One of the Greatest Ad Campaigns in the Heating Industry—

One of the Most Complete Lines in the Heating Industry—

help you PROFIT with fluid heat

AUTOMATIC HEATING EQUIPMENT

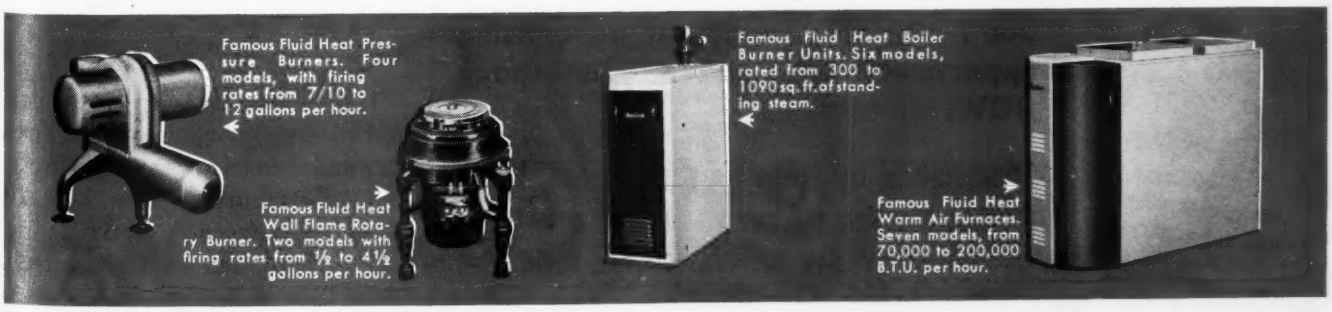
SMASHING, COLORFUL ADVERTISEMENTS month after month in *Saturday Evening Post* and *Better Homes & Gardens!* Ads aimed at *your* customers . . . homeowners . . . prospective homeowners . . . people with money in their pockets and heating on their minds! Ads that tell readers to visit *you* for the best heating equipment money can buy! Ads with just one purpose—to *help you sell!*

OVER 7,500,000 POTENTIAL CUSTOMERS SEE THESE ADS EVERY MONTH!

And remember, you're selling one of the most complete lines in the heating industry! A complete line of Warm Air Furnaces, Boilers and Conversion Burners . . . all backed by over 30 years of Fluid Heat research and engineering know-how! Automatic heating equipment that fits every home heating need and gives amazingly trouble-free service, remarkable efficiency, and long life.

That's the sensational profit campaign Fluid Heat has for you in '52! Be sure *you* cash in by showing and pushing Fluid Heat! If you're not already selling this high-profit, top-quality line, write us for details. Address: FLUID HEAT DIV., Anchor Post Products, Inc., 6700 Eastern Ave., Baltimore 24, Md.

"WORLD'S ECONOMY CHAMPION"


Famous Fluid Heat Pressure Burners. Four models, with firing rates from 7/10 to 12 gallons per hour.
Famous Fluid Heat Wall Flame Rotary Burner. Two models with firing rates from ½ to 4½ gallons per hour.
Famous Fluid Heat Boiler Burner Units. Six models, rated from 300 to 1090 sq. ft. of standing steam.
Famous Fluid Heat Warm Air Furnaces. Seven models, from 70,000 to 200,000 B.T.U. per hour.

1...for the money

(your best advertising buy)

2...for the show

(this is it—the big Show Issue)

3...to get ready

(advertising forms close 4 days early)

and 4...to Go!

Make sure *your* advertising message goes to the Show! The big April Show Issue will preview the exhibits, features, and program of the 29th Oil Heat Exposition in Philadelphia. It will be mailed early, to secure complete distribution before the Show opens, and additional copies will be distributed at the hall.

Final Advertising Forms Will Close Promptly on March 21st—four days ahead of the usual schedule.

Don't miss this important advertising opportunity — reserve your space NOW!

Published by Heating Publishers, Inc.
232 Madison Avenue, New York 16
Midwest: 549 W. Washington Blvd., Chicago, Ill.

For 33 Years the Industry's Authority.

James L. Meagher, Jr., has been appointed general sales manager and *Bryant Doty* sales promotion manager, Anchor-Hart Division, Stratton & Terstegge Co., New Albany, Ind. Meagher has been with Stratton & Terstegge since his discharge from service in 1946. In this period he has worked in various departments of the company and recently had established an excellent record as sales representative in eastern Tennessee.

Bruce P. Hyde has been appointed by Spencer Heater, Lycoming-Spencer Div., AVCO Mfr. Corp., Williamsport, Pa., sales representative for the northern New Jersey territory and *Edson C. Konkle* has been named sales representative for Virginia.

Joseph G. Stalb has been appointed factory representative for the New York office, Jackson & Church Co., Saginaw, Mich., representing its complete line of suspension and floor model furnaces. Stalb has been affiliated with heating equipment sales management for 28 years. He formerly was regional manager of industrial heating sales for the Carrier Corporation's New York office.

George T. Greulich on January 1 resigned as sales manager for Skuttle Mfg. Co., Detroit 7, Mich. He plans to vacation for several months and upon his return to Detroit contemplates establishing himself as a manufacturers representative. His son, Alfred, will be affiliated with him. It is Greulich's plan to represent several manufacturers throughout the state of Michigan, working from his home at 17245 Evergreen Road, Detroit.

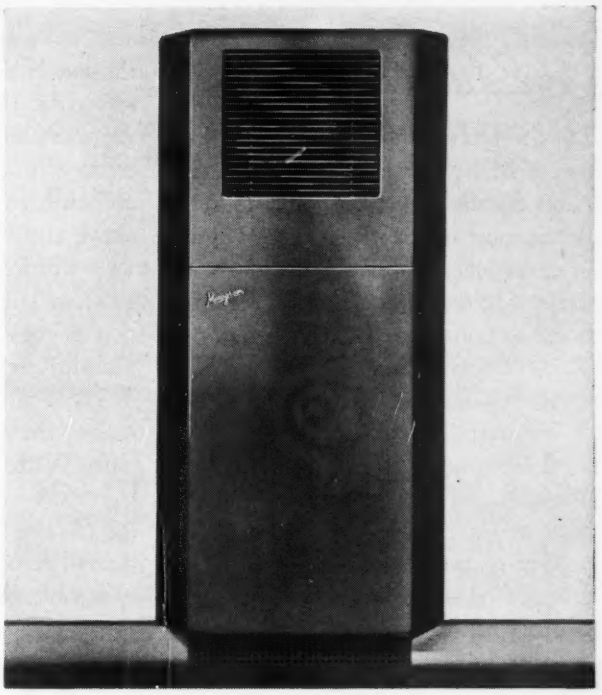
Jack E. Hess, manager of the general division, York-Shipley, Inc., York, Pa., and formerly managing director of Oil-Heat Institute, New York 16, N. Y., was married to the former Miriam W. Shull on December 31. They have made their home at 431 Park Street, York, Pa.

New Wall-O-Matic *Monogram*

In-the-Wall Oil Furnace

You'll get jobs easier with this beautiful new wall furnace because no expensive duct-work is required. Monogram is the answer to your problem of supplying clean, abundant heat to small homes.

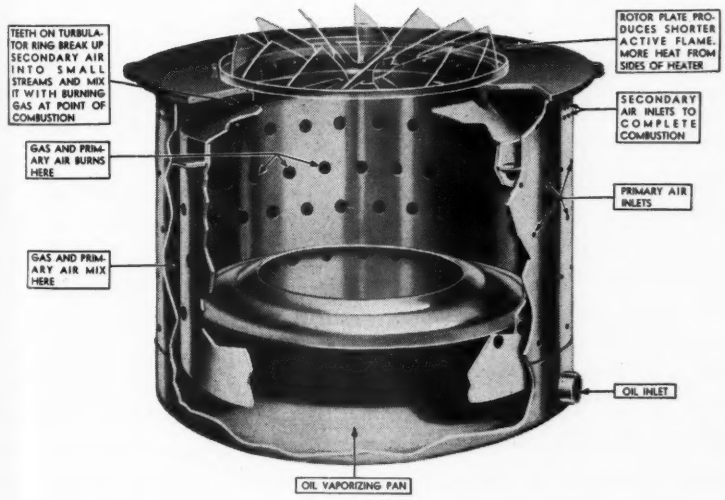
It's a well designed unit which will fit in with any scheme of decorations, and as usual dependable MONOGRAM performance will supply years and years of comfortable, care-free heat at low cost. Each unit is equipped with the Power Air Burner that gets as much heat as possible from every single drop of oil, burning with a clean, blue flame. Small wonder your customers will report less oil consumption and a pleasant winter of clean, even heat.



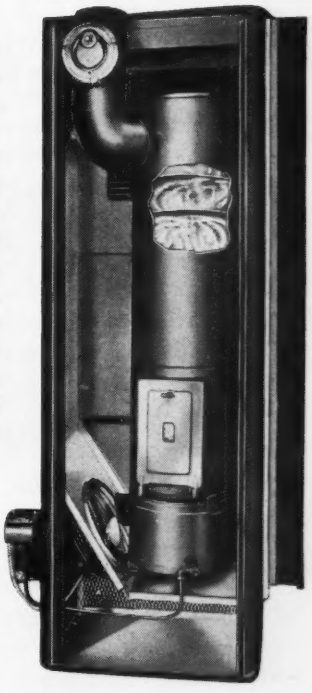
AND HERE'S PROOF...

THE POWER AIR BURNER

THAT PRODUCES MORE HEAT AT LESS COST


TEETH ON TURBULATOR RING BREAK UP SECONDARY AIR INTO SMALL STREAMS AND MIX IT WITH BURNING GAS AT POINT OF COMBUSTION
GAS AND PRIMARY AIR BURNS HERE
GAS AND PRIMARY AIR MIX HERE
ROTOR PLATE PRODUCES SHORTER ACTIVE FLAME. MORE HEAT FROM SIDES OF HEATER
SECONDARY AIR INLETS TO COMPLETE COMBUSTION
PRIMARY AIR INLETS
OIL INLET
OIL VAPORIZING PAN

The exclusive Power Air Burner produces more Btu's of heat for its size because it is more efficient. It has a wider range of operation for its size — works with equal efficiency during mild weather or really rough cold spells. And just as important it burns with a clean, blue flame much the same as a gas burner. The MONOGRAM Power Air Burner produces more heat at less cost . . . let us prove it to you.



SPECIFICATIONS A569 MONOGRAM OIL FURNACE

BTU Rating	65,000	Gauge Baffle	18
Combustion Drum	13x48	Gauge of Combustion Drum	20
Height from floor of front of cabinet	74½	Maximum Oil Consumption per 24 hours ..Gal.	14¾
Height from floor of back of cabinet	72	Minimum Oil Consumption per 24 hours ..Gal.	1¼
Width of Front	32	Grade Distillate recommended	#1
Width of Back	24	Motor	45 watt—1500 RPM
Flue Outlet	6"	(High Impedance Protected)	
Burner	10"	Shipping Weight	300 lbs.
Gauge Casing	20		

See the WALL-O-MATIC on Display, Booth 110, Oil Heat Show

THE QUINCY STOVE MANUFACTURING COMPANY

QUINCY **ILLINOIS**

Editorial Leaks

AN UNFORTUNATE industry practice in the Midwest is that of putting oil tanks outside and above ground. This occurs most frequently in cheap builder developments although occasionally dealers use these unburied tanks in fine home sections. One Chicago group of $25,000 houses has 275 gallon tanks leaning against the back wall.

We are talking about tanks for No. 2 oil for central heating plants. Outside tanks for space heaters have long been in common use and they cause little or no trouble because of the light grade of oil stored.

But when you store No. 2 oil outdoors you are constantly flirting with trouble in the pour point. Government specifications for this oil call for a pour point of 20°F. Under special circumstances this may be reduced but in no event can it be under 0°F. Illinois and Wisconsin, states where this practice is reported as being prevalent, often have temperatures below zero, and very much of the winter they're below 20°.

When temperatures fall below the pour point of an oil, it just won't flow. A cold snap of several days length will stop the operation of a lot of oilburners having open outside tanks.

Then come the service calls, and most often the service man will blame the trouble on the oil. Oilheating gets a black mark, and that in an area where cheap natural gas has been tough competition.

There seems to be no limit to the imagination of cheap builders of houses without basements. To bury the 275 gallon tank might cost another $40 and the home buyer would avoid a lot of future grief, but that seems of small concern to the seller.

These oilheating installations are not being made by reputable dealers. They can be put in by almost anyone who owns a pipe wrench. A prominent Chicago oil man reported that there are literally thousands of these outside-tank jobs in that area.

Oilheating must be a wonderful facility to have grown so strong in spite of miserable practices like this one.

❖

THE EAST COAST supply problem for the rest of the heating season has been solved by the generosity of 12 large suppliers who have pledged to the Government that they will bring in three million barrels of heating oil over and above their own needs, even though they will lose up to 2¢ a gallon.

Three million barrels equal 126 million gallons. The loss involved is significantly large.

The outright Samaritan gesture seemed the only thing to do at this late date. With the Government refusing to control tanker rates and also refusing to raise fueloil prices, because only a small percent of total oil demand was in trouble, the industry was faced with the choice of accepting a subsidy or making a gift.

In choosing the Santa Claus routine the oil industry said in effect that it doesn't need charity . . . it can take care of its people.

The solution is temporary. Before mid-summer the Government will offer some more permanent type of solution. There's a strong chance that there will be a price rise for the East Coast. The subsidy proposed for tanker rates did seem the equitable choice but if oil people simply don't want another penetration of Government into their operations, who can say they're wrong in refusing subsidies? There are still a few farmers left who don't enjoy agricultural subsidies.

If fueloil prices are raised in the summer, that may put an end to tanker rate complaints, but we doubt it. It will be a makeshift solution.

On the other hand, there is little question but that Eastern fueloil prices will be raised in the longer term future for another purpose . . . that of supply.

We are still pushing the Gulf Coast and East Coast refiners hard, as we continue to grow faster than gasoline each year. Fueloil is forcing most of the refinery expansion . . . not gasoline.

No. 2 oil at the Gulf is selling three cents below regular gasoline. When the spread is wider than two cents the refiners are not anxious to raise their fueloil yields to take care of us. If the oilheating industry wants to keep growing just as fast as it can push ahead, and wants the oil companies to help us instead of trying to put on the brakes, fueloil should be sold no more than two cents under gasoline at the refinery level. Long range, it no doubt will settle at that point.

❖

OIL STOCKS continue to be a good buy even though there are enough daily ups and downs to scare the fast-buck speculators. In a paper by Frederick Coqueron and Joseph Pogue of the Chase National Bank, New York, some of the interesting financial habits of oil companies are brought to light.

The paper, presented to the American Institute of Mining and Metallurgical Engineers, reviews the dollar history of 30 large oil companies.

In 17 years the companies earned 25.2 billion dollars. They paid out in dividends only 5.6 billions and the remaining 19.4 billions were plowed back into the business.

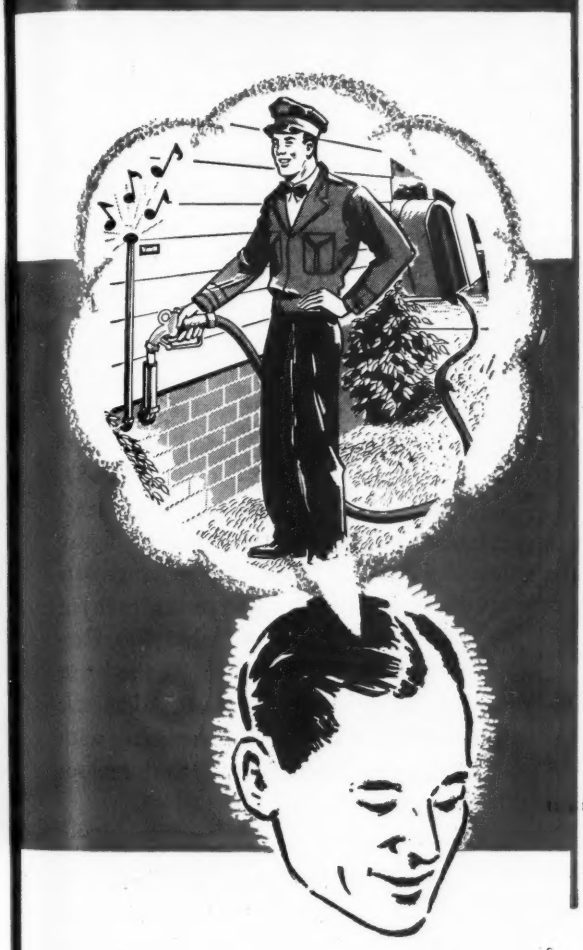
Quoted stock prices on the daily exchanges are influenced mostly by the public's desire for dividends. Low dividend stocks are quoted low even though they may have much higher net-worth values. That's been the history of good oil stocks. The values plowed back into the business are sooner or later distributed as stock dividends or splits. Moreover, the companies have so much retained wealth that future dividends are fairly certain.

If the past is any guide to the future, persons who buy substantial oil stocks, put them down in the old sock and forget them for a few years will have a lot more than their pensions to live on, come 65.

❖

HOW THE MIGHTY sometimes slip! When the streamliner "City of San Francisco" was marooned several days in the high Sierras a shivering group pictured in overcoats at a card game were Minneapolis-Honeywell VP's . . . Charles Sweatt, Tom McDonald and Willard Huff. Even Moduflow needs fuel!

merchandising imagination



*"The (fueloil) market is sure to keep on growing *** it promises a fertile field for distributors who display some merchandising imagination."*

—"Fueloil Marketing in 1951"
FUELOIL & OIL HEAT, January 1952

It is not unusual for a Fueloil Dealer to find that close to 50% of his new customer leads come through satisfied old customers.

So the starting point for "merchandising imagination" is right with your present customers; keeping them satisfied and happy.

What does a fuel oil customer want most? Independent surveys tell us it is *clean, convenient* delivery.

No wonder thousands of independent and major oil companies have had the "merchandising imagination" to see the worth of installing VENTALARM Signals (Model "LC") on all old customer tanks. Because it is VENTALARM Signal that guarantees "no spill" deliveries and gives the customer the freedom to come and go regardless of delivery time.

For full particulars on how you can display "merchandising imagination"

. . . write for our eight-page booklet entitled, "A SALES PLAN FOR FUEL OIL ACCOUNTS".

See the eleven-page VENTALARM Signal (Model "LC") presentation in the February issue of FUELOIL & OIL HEAT. Read the success stories of those who have actually made Model "LC" installations. See how it has made it easier for them to renew old contracts; to get new contracts. See how VENTALARM Signal has jumped their profits in the face of rising costs by slashing delivery expenses as much as 30%. If you don't have a copy of the magazine, write for a reprint.

A SALES PLAN FOR FUEL OIL ACCOUNTS
FUEL OIL DELIVERY METHODS HAVE CHANGED!
TODAY–
TIME is the essence of PROFIT
The following 11 pages tell
A POWERFUL STORY OF PROFIT FOR YOU

SCULLY SIGNAL COMPANY

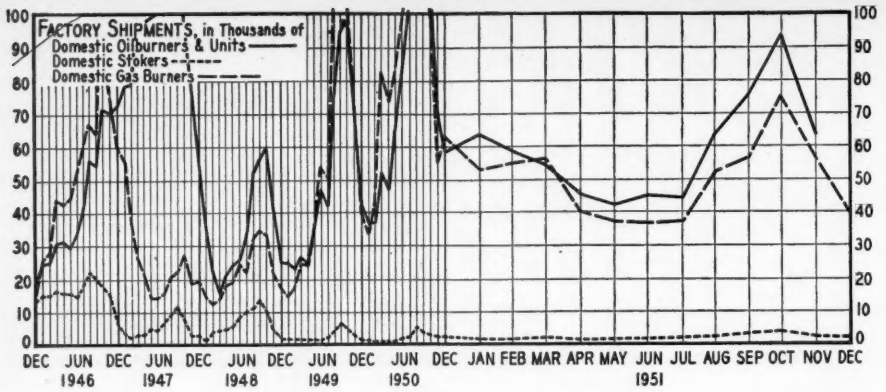
76 First Street, Cambridge 41, Mass.

Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario

See your REGULAR SUPPLY HOUSE for VENTALARM Signal (Model "LC") in a variety of sizes . . . and other Scully Fueloil Delivery Aids.

INSTALL MODEL "LC" ON *ALL* OLD CUSTOMER TANKS

VENTALARM®
WHISTLING TANK FILL SIGNAL

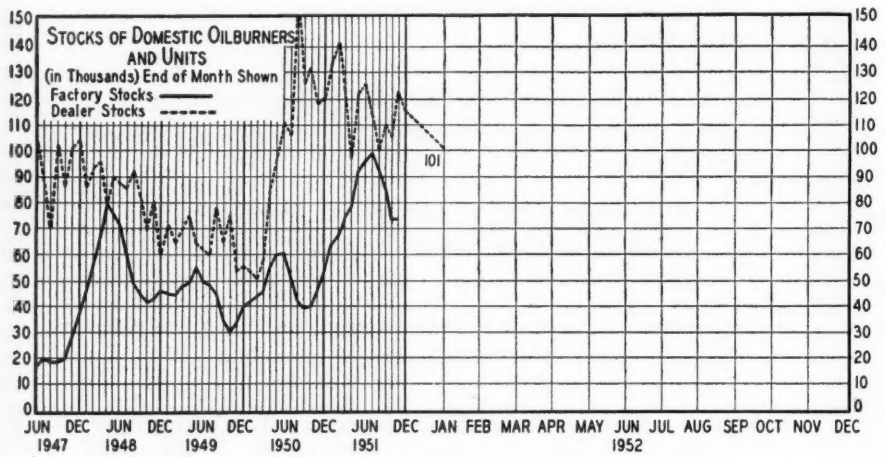

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
Domestic Gas Burners
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1946 1947 1948 1949 1950 1951

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 147 reporting to Census Bureau, FUELOIL & OIL HEAT'S estimates of shipments are:

	NOVEMBER			ELEVEN MONTHS		
	1951	*1950*	*Percent Change*	*1951*	*1950*	*Percent Change*
Conversion	43,663	47,577	— 8.2	461,445	624,484	— 26.1
Boiler Units	4,805	6,064	— 20.7	54,933	84,066	— 34.6
Furnace Units	13,245	16,594	— 20.1	134,677	157,752	— 14.6
All Domestic	61,713	70,235	— 12.1	651,055	866,302	— 24.8
Commercial	2,588	3,747	— 30.9	37,139	32,173	+ 15.4
Total	64,301	73,982	— 13.0	688,194	898,475	— 23.4

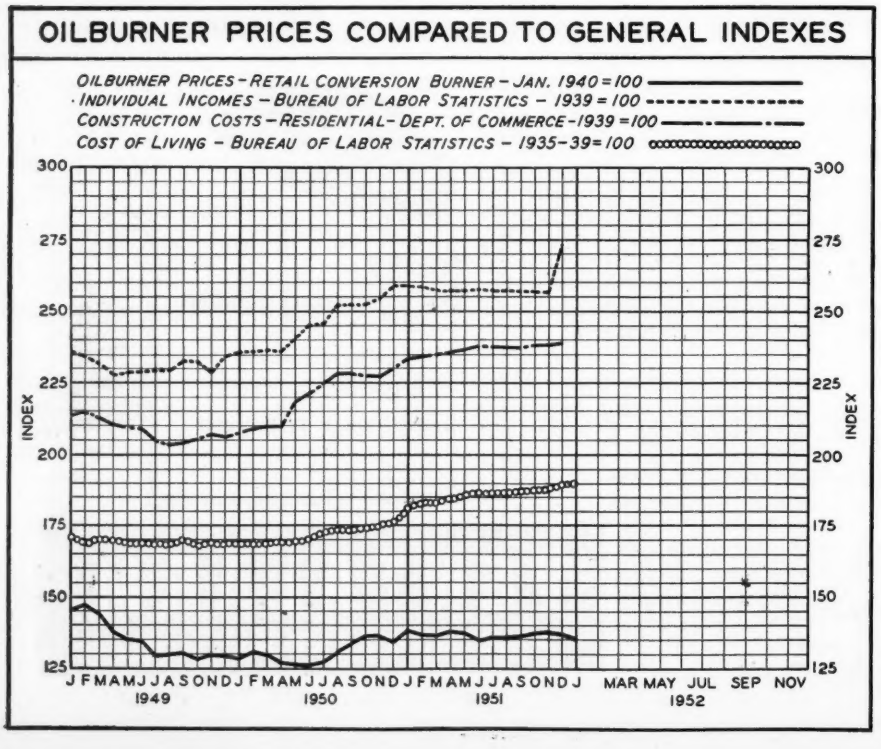

STOCKS OF DOMESTIC OILBURNERS AND UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
101
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

January Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
January Aver.	$328	$688	$643
December Aver.	330	695	633

Price Index: Conversion Burners: January 1940 is 100%

WHOLESALE				RETAIL			
January	138.8	Six months ago	138.0	January	135.4	Six months ago	136.1
December	137.2	Year ago	136.5	December	136.3	Year ago	137.9


OILBURNER PRICES COMPARED TO GENERAL INDEXES
OILBURNER PRICES - RETAIL CONVERSION BURNER - JAN. 1940 = 100
INDIVIDUAL INCOMES - BUREAU OF LABOR STATISTICS - 1939 = 100
CONSTRUCTION COSTS - RESIDENTIAL - DEPT. OF COMMERCE - 1939 = 100
COST OF LIVING - BUREAU OF LABOR STATISTICS - 1935-39 = 100
INDEX
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J MAR MAY JUL SEP NOV
1949 1950 1951 1952

Oilheating Trends

STARTING the new year in fine style January installations of domestic oilburners and units were approximately 48,145 or a rise of 20% above the previous year. The January installations were divided: New homes 11,538; Replacements of old oilburners 6,119; Conversions from other fuels 30,488.

It is interesting the way the rate of gain has been climbing. Where January was up 20%, December had been up 14% over the previous year, November was up 5%, October was up 1%. There is no telling how long this acceleration can continue but probably not for long.

BURNER STOCKS: On February 1 the dealers had on hand approximately 100,809 domestic oilburners and units. This figure was made up: Conversion burners 70,177; Boiler-burner units 12,551; Furnace-burner units 18,081. The total of the three types represents quite a drop from the January 1 figure of 116,242. The principal change was in boiler and furnace units each of which dropped more than 5,000. Factory stocks on November 30, the latest available data, were 74,465 domestic burners and units. This compares with 45,931 on the same date the previous year.

TANK STOCKS: Customer oil storage tanks in dealer hands on February 1 were approximately 124,674, showing quite a rise from 109,105 the previous month. On February 1 a year ago they were 100,070. The average price paid by dealers in January for a 275-gallon tank was $41, the same as the previous month. By sections of the country the average was New England $36; Mid-Atlantic $43; Midwest $37; Pacific Northwest $45.

MATERIAL SHORTAGES: There are almost no material shortages at the dealer level of the industry but we made a periodic check this month to find this out. Asked how many installations could not be completed during January due to shortage of one or more items, it is clear that the total number of installations in the country so afflicted was less than 100. The only items mentioned as holding back job

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✓ ONLY *Combustioneer* OFFERS THESE EXCLUSIVE FEATURES!

★ **"Triple Velocity Visorhead"**—delivering secondary air at 3 velocities, above, below and around nozzle . . . the *only* way to assure *complete* intermixture.

★ **"Flo-Mist" Nozzle**—with opening *30* to *40* times as large as in high-pressure burners, assuring maximum combustion efficiency. And it's *guaranteed clog-proof!*

★ **"Flip-Of-A-Finger"** Capacity Adjustment—can be set to exact fuel requirements while burner is operating, capacity .60 to 3.0 g.p.h.

★ **"Hydra-Vated" Pump**—operated *not* mechanically but hydraulically.

★ **"Free-Floating Piston"**—floating in a bath of oil—no pins, rods, levers, cams, springs, no metal-to-metal wear. Measures oil flow . . . no waste due to oversizing.

★ **Fuel Adaptability**—to most installations, inside or out, with single or double fuel lines . . . burns all domestic fuel oils including 100% catalytic . . . readily interchangeable to high pressure . . . equipped with two-unit combustion control, and transformer shielded for radio and TV . . . has highly efficient straight-line-delivery fan, driven by standard ⅛ h.p. motor.

Combustioneer GAS BURNERS • HIGH AND LOW PRESSURE OIL BURNERS • STOKERS • COAL-GAS-OIL FURNACES • HUMIDIFIERS

Combustioneer OFFERS UNMATCHED QUALITY AT COMPETITIVE PRICES!

Combustioneer DIVISION
THE STEEL PRODUCTS ENGINEERING COMPANY
Springfield, Ohio
"Better Heating Since 1928"

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The Steel Products Engineering Company
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Please send me proof that I can make more Oil Burner sales and bigger profits with the **Combustioneer** Dealer Franchise.

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FIRM NAME _____

STREET ADDRESS _____

CITY _____ ZONE _____ STATE _____

VISIT COMBUSTIONEER BOOTH NO. 107 AT PHILADELPHIA O.H.I. SHOW

completions were radiators and convectors.

Asked to what extent they were forced to use black market materials only 9% of the reporting dealers are in this position and they are paying black market prices on less than 10% of their installation and service departments. Thus, it is clear that for the industry as a whole black market buying represents less than 1% of purchases.

MATERIAL INVENTORIES: Asked about their February 1 inventories of installation and service materials other than oilburners and tanks, 56% of the dealers had higher inventories than on the same date of 1951 and 44% had lower. The weighted average of the whole lot shows that the industry position on these materials is up about 2% from the previous year. That is actually not good enough since we expect a higher level of industry activity in the months just ahead.

WINTER DISCOUNTS: Quite a number of oilburner manufacturers offer their dealers special pre-season discounts to get them to stock up with oilburners in the winter and spring. In many instances these are simply special deals but 11% of the reporting dealers say that their factories have established winter discount policies. These discounts range from 5% to 10% with most of them at the 5% level. In addition to the winter discount some factories offer a floor plan arrangement where the local bank finances dealer stocks with the manufacturer's endorsement. Among the reporting dealers this month 1 in 8 say that their factories provide this accommodation.

FUELOIL DIFFERENTIALS: At the request of one of the reporting fueloil distributors the group was asked this month for more detail on their prices for different sized drops. This information was gathered for both No. 2 oil and No. 1 or kerosene. In the New England area none of the reporting companies offers any discounts up to 400 gallons, nor do they charge any premium price for small drops. In the volume bracket 401-600 gallons we find one-fourth of the reporting companies offering discounts of .5¢. One company reports a discount of .1¢ in that bracket. Moving to the 601-1000 gallon bracket for drop sizes we find just half of the reporting companies have a discount here ranging from .5¢ to .9¢, most of them being .5¢ or .6¢. Then we find that one-fourth of the reporting companies give a refund to large users at the end of the season. The common practice is to refund .5¢ per gallon if the buyer uses 10,000 gallons a year. One company gives this year-end rebate to customers using 5,000 gallons. Again about 6% of the reporting New England oil men give .5¢ discount to any commercial account re-

(Please turn to page 157)

Oilburner* and Building Permits

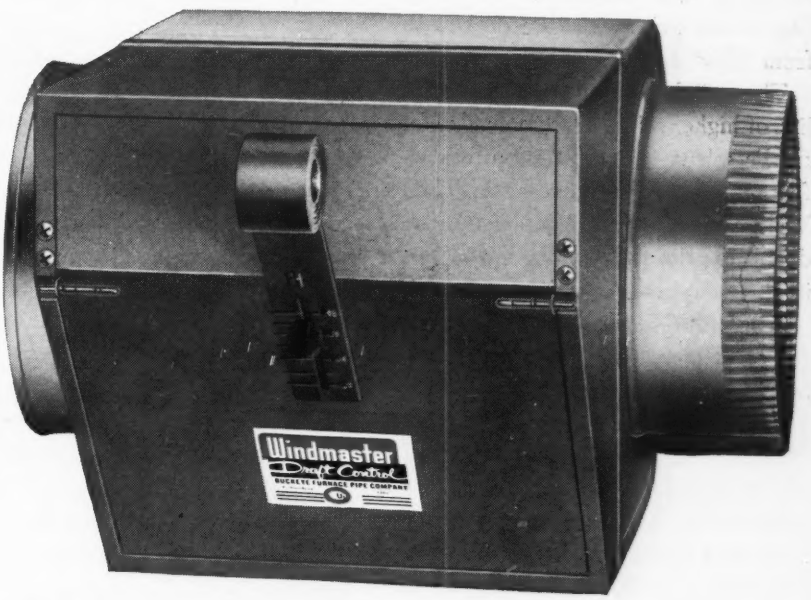
OILBURNERS					DWELLINGS				
January		12 MONTHS			January		12 MONTHS	
1952	1951	1951	1950		1952	1951	1951	1950
22	54	676	1094	Albany, N. Y.	..	..	..	..
156	306	3312	4875	Baltimore, Md.	299	443	5112	2661
..	..	..	..	Binghamton, N. Y.	2	3	112	150
..	..	..	..	Bloomfield, N. J.	6	3	110	342
..	654	..	..	Boston, Mass.	36	12	423	319
110	81	1184	1398	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	48	32	584	650
105	1	322	34	Columbus, O.	..	..	..	..
..	..	..	..	Des Moines, Ia.	..	71	870	1638
773	342	6878	2282	Detroit, Mich.	240	583	5975	11981
18	48	657	878	Elizabeth, N. J.	..	5	48	63
47	45	420	530	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	13	37	409	406
..	..	..	..	Hackensack, N. J.	7	2	114	208
..	221	1915	1535	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
9	14	418	552	Irvington, N. J.	1	2	60	51
..	..	..	..	Lynn, Mass.	8	10	157	171
60	74	374	565	Meriden, Conn.	..	..	..	..
..	93	1247	3033	Milwaukee, Wisc.	..	138	3056	3611
167	86	1080	1056	Minneapolis, Minn.	24	95	1386	2057
22	22	285	362	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	3	..	27	68
19	21	321	503	Mt. Vernon, N. Y.	..	..	..	..
76	95	1938	2346	Newark, N. J.	..	..	..	..
121	19	903	947	New Bedford, Mass.	..	..	..	..
129	58	595	697	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
24	44	487	423	New Rochelle, N. Y.	32	21	156	198
..	2598	46993	35339	New York City (total)	..	..	..	..
..	1905	40206	28124	Brooklyn-Queens	..	..	..	..
..	693	6787	7215	Manhattan, Bronx, Rchd	..	..	..	..
..	63	1465	1399	Norfolk, Va.	135	71	997	1359
..	..	..	..	Oakland, Calif.	..	..	..	..
82	78	968	1243	Omaha, Neb.	41	47	983	1479
9	15	239	289	Orange, N. J.	1	18	33	18
14	13	247	388	Passaic, N. J.	..	..	..	..
21	22	667	1047	Paterson, N. J.	6	9	199	218
589	915	10136	14101	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	16	26	179	312
49	89	726	664	Portland, Me.	3	3	162	232
385	250	4445	5998	Portland, Oreg.	69	136	1451	2490
12	12	270	253	Poughkeepsie, N. Y.	..	..	..	..
116	90	1081	803	Providence, R. I.	9	19	275	318
..	..	..	..	Reading, Pa.	8	3	78	79
64	97	655	1155	Richmond, Va.	42	39	595	723
58	28	701	1148	Roanoke, Va.	..	..	..	..
220	141	2883	3475	Rochester, N. Y.	..	..	..	..
..	38	274	373	Rockville Center, N. Y.	..	11	103	197
35	29	382	603	Salem, Mass.	4	3	82	79
..	34	2113	418	St. Louis, Mo.	21	37	628	969
56	109	864	2242	St. Paul, Minn.	38	41	1170	1640
44	71	644	674	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	137	150	1847	2761
..	..	..	..	Springfield, Mass.	49	29	877	764
63	62	608	968	Stamford, Conn.	..	..	..	..
6	6	59	..	Syracuse, N. Y.	18	14	347	591
..	..	..	..	Trenton, N. J.	3	2	68	64
..	..	..	..	Utica, N. Y.	5	5	161	175
114	108	1472	2086	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	16	40	427	551
26	19	401	410	White Plains, N. Y.	9	9	108	239
..	80	1006	1143	Wilmington, Del.	6	8	514	256
147	126	1947	3146	Worcester, Mass.	..	..	..	..
63	48	890	1074	Yonkers, N. Y.	..	..	..	..
4031	3638	105089	103549	*Totals*	1352	1952	29883	40088
+10.8		+1.5		*Percent Change*	—30.7		—25.4	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

4 simple steps

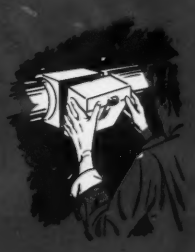
more net profit per installation

You can trim installation cost and add the savings to net profit simply by installing the Windmaster Draft Control. Designed for better operating efficiency, the Windmaster also offers money-saving advantages every step of the way on every installation. Check these steps and see how many dollars *you* can add to your net profit per installation with the



Windmaster Draft Control
patented

SIMPLIFIED INSTALLATION can be made in 3 minutes. No special tools or instruments are needed for proper installation for best heating efficiency.



SIMPLIFIED FITTING—The exclusive adapter* fits snugly in as a pipe section on any flue. Patented control snaps quickly into adapter for horizontal, vertical or sloping flue positions.

SIMPLIFIED INSTRUCTIONS are easy to read and follow . . . an important factor in these days of skilled labor shortage and fast turn-over.

SIMPLIFIED SETTING of the calibrated balance* takes only 3 seconds. It can be locked in place at furnace manufacturer's precise draft specifications.

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fueloil & oilheat

Government Influences on Fuels

by
Milburn Petty

WASHINGTON—The situation on East Coast fuel oil prices is still in the off-again-on-again stage.

Currently, the Office of Price Stabilization is re-examining the Gulf-East Coast price structure on orders from Chief Mobilizer Wilson.

The OPS had suggested a subsidy in lieu of higher ceilings recommended by the Petroleum Administration for Defense to offset rising tanker rates. Then Wilson killed the subsidy plan and ordered the price study with adjustments, if any, to become effective by June 1.

The OPS petroleum branch now feels that increases of 1¢ or more may be needed due to higher tanker rates.

Meanwhile, the PAD has put into effect a voluntary program under which 11 majors and one independent supplier have agreed to provide up to 3,000,000 barrels of distillate fuels on the East Coast for other independent suppliers (barge and cargo buyers) who have been unable to fill their requirements for this winter.

These 12 suppliers are bearing the expense of this themselves. Acting PAD Chief Frame said it was the "finest" example of industry statesmanship he had ever witnessed.

Navy Seeks Special Fuel Oil

One of Michael DiSalle's last acts as price stabilizer—setting Navy Special Fuel Oil ceilings at $2.10 at the Gulf and $2.15-$2.20 in California—is still plaguing the Navy.

These prices are less than the total of the ceiling prices for the components, cutter stocks and residual fuel.

This put a crimp in the Navy's plans for buying light fuel oil at the Gulf and tankering it around to California for blending with residual.

Since the OPS order prohibited anyone from selling or delivering—or accepting delivery—of Navy Special at over ceiling prices, all parties concerned were a bit reluctant to proceed with the blending arrangements.

Navy is trying to line up commitments, voluntarily, for the 5,300,000 barrels needed until June 30. But in the background a big stick is waved.

But the PAD can be expected to see that the Navy gets all the fuel oil it needs, somehow or the other, despite the action of OPS in setting prices at "confiscatory" levels.

Burner Makers Seek Materials

National Production Authority is considering the request of the Oil Burner Manufacturers Industry Advisory Committee that they be allocated more materials for the second half of this year.

The burner makers pointed out to NPA that the base period for their allocations was the first half of 1950 when production was abnormally low. In practice, about two-thirds of the burners manufactured are produced in the second half of the year.

The group also recommended that burner parts be restored to the "B" list under the Controlled Materials Plan. This would mean that the parts manufacturers could get their materials direct, not through burner manufacturer.

OPS May Act on LPG Prices

Swamped by over a hundred petitions from distributors of liquefied petroleum gas, who have had to go farther and pay more to get their supplies this year, OPS may soon grant relief.

OPS is about convinced that something should be done—but has not decided just how to accomplish it.

The big question seems to be how to provide the distributors with relief without encouraging some of them to oversell their expected supplies for next winter.

Steel Asked for Oil Expansion

PAD has requested that 2,685,000 tons of steel be allocated for oil and gas, at home and abroad, during the third quarter.

This would be enough to launch the oil expansion program—costing $10 billion—on July 1 and provide for continuing work on the present gas transmission lines and other gas industry projects already under way.

PAD emphasizes that this is not a government program but rather the sum total of what the oil companies, individually, would like to do if given the materials.

The expansion program does not include any new gas projects. However, PAD Chief Bruce Brown has said he hopes that steel for oil expansion will not be allotted at the expense of that required for gas projects under way.

Gas transmission lines have been given 1,564,000 tons of line pipe for the four quarters ending this June compared with 870,447 for oil pipelines.

However, the quarterly allotments for gas have declined sharply while those for oil have risen. Oil lines were allotted 595,530 tons of pipe in the first half of this year compared with 274,917 tons in the last half of 1951; tonnages for gas were 930,773 and 634,150, respectively.

With 19,700 miles of oil lines—crude and products—programmed for the 18 months beginning July 1, oil should soon overtake gas in the line pipe allocations.

New Tanker Building Goal Set

U. S. Maritime Administration has set a goal of 100 new privately-built tankers, for inclusion in the mobilization program. The government has agreed to allow rapid tax write-offs for 60% of the cost of constructing such tankers, provided they are built in U. S. shipyards and fly the American flag. It is estimated that 25 such tankers are on order or planned now.

Oil from Coal 'Not Competitive'

The hydrogenation process for making synthetic heating oils, gasoline and other products from bituminous coal was admitted to be not commercially competitive with fuels from petroleum at this time. This came from Joseph D. Doherty, acting chief of the Bureau of Mines synthetic fuels branch.

In fact, coal hydrogenation could not even come close to competing with natural petroleum if it were not for the synthetic chemicals which "naturally occur" in the making of synthetic fuels from coal.

On the other hand, the costs of making oil from shale are now so close to those of natural petroleum that one oil company in California is "giving careful study" to this project, said Interior Secretary Chapman at the same hearing where Doherty testified.

fueloil & oilheat

I-B-R School of Modern Heating

Intensive three-day Courses teach latest Developments in Design and Estimating

by
Norman J. Radder*

MANY OILBURNER DEALERS, servicemen, and others connected with the fueloil industry are among the 4,100 who have attended the I-B-R School of Modern Heating.

A total of 81 schools have been held since April, 1950, when this educational program was launched under the sponsorship of The Institute of Boiler and Radiator Manufacturers.

Offering a unique opportunity to members of the oilheat industry to become acquainted with the latest developments in the estimating, design, and installation of hot water and steam heating systems, the I-B-R School of Modern Heating appeals to all who have an interest in keeping abreast of the progress in installation techniques which help to reduce costs.

The I-B-R School of Modern Heating was prominently featured on the front cover of a recent issue of a monthly memorandum pad which the Petroleum Heat and Power Company sent to 15,000 heating contractors throughout the country.

In the promotional message on this pad, Petro points out that "all heating men who attended one or more of the I-B-R schools strongly recommend that all other heating men take full advantage of the I-B-R school which will be conducted in his area."

Termed "a heating short course on wheels," the I-B-R School of Modern Heating provides practical instruction in the design and installation of hot water and steam heating systems. Most of the three-day course is devoted to practical classroom work in calculating and designing various types of hot water and steam heating systems. The course now includes lessons on panel heating systems as well as radiator and baseboard installations. The course also includes explanatory lectures by the instructor. Time is provided for a question and answer period after each lesson.

The course of instruction covers new, simplified methods and time-saving procedures. The course shows students how to reduce installation costs by correct designing.

R. E. Ferry, general manager, The Institute of Boiler and Radiator Manufacturers, points out that "profitable selling is largely a matter of keeping your business abreast of current conditions. Rule-of-thumb designing in the heating field today is an invitation to failure. Good engineering enables the contractor-dealer to keep within the competitive range and results in satisfied customers.

"The I-B-R School of Modern Heating shows contractors how to eliminate errors which lead to high costs and loss of business.

"Thousands of individuals in the heating industry have taken this course and are now using these simplified calculation and design procedures to install systems, giving satisfaction to their customers from the standpoint of low initial cost, operating expense and the ultimate in heating comfort. Students who have benefited from I-B-R Schools include men who have recently come into the heating industry as well as men of long experience."

The instructor in the School of Modern Heating is Arthur L. Wales. Mr. Wales is the field training director of the Institute. Prior to his connection with the School of Modern Heating Mr. Wales had considerable experience in the heating industry. In fact, Mr. Wales has an ideal background for the work. Much of the success of the school is due to his efforts.

Mr. Wales designed and equipped a special car to carry the equipment needed for the School. He has traveled more than 45,000 miles in conducting the 81 Schools in various cities.

A view *of the I-B-R School of Modern Heating held in Chicago on April 10 to 12, 1951. Chicago is bettered only by Boston and Hartford in attendance at the School. Attendance at this meeting was 101 and at the 1950 School 100 participated in the course.*

*Secretary, Plumbing and Heating Industries Bureau.

Each student receives a kit which contains a complete set of I-B-R Installation Guides, (including the new Guide No. 6 on Panel Heating), all necessary forms, floor plans, area tables and calculation sheets. All working material is gathered in a convenient binder so that the student has a complete file for future reference.

Titles of the I-B-R Guides are:

"One Pipe Forced Circulation Hot Water Heating Systems" (No. 100)

"One Pipe Steam Heating Systems" (No. 2)

"Indirect Water Heaters" (No. 3)

"Baseboard Heating Systems" (No. 5)

"Panel Heating for Small Structures" (No. 6)

The I-B-R Installation Guides not only provide the basic information necessary to correctly size a heating system but they also provide guidance on design and installation problems. The Guides represent a big advance in the heating industry in the elimination of rule-of-thumb methods of calculating heat losses.

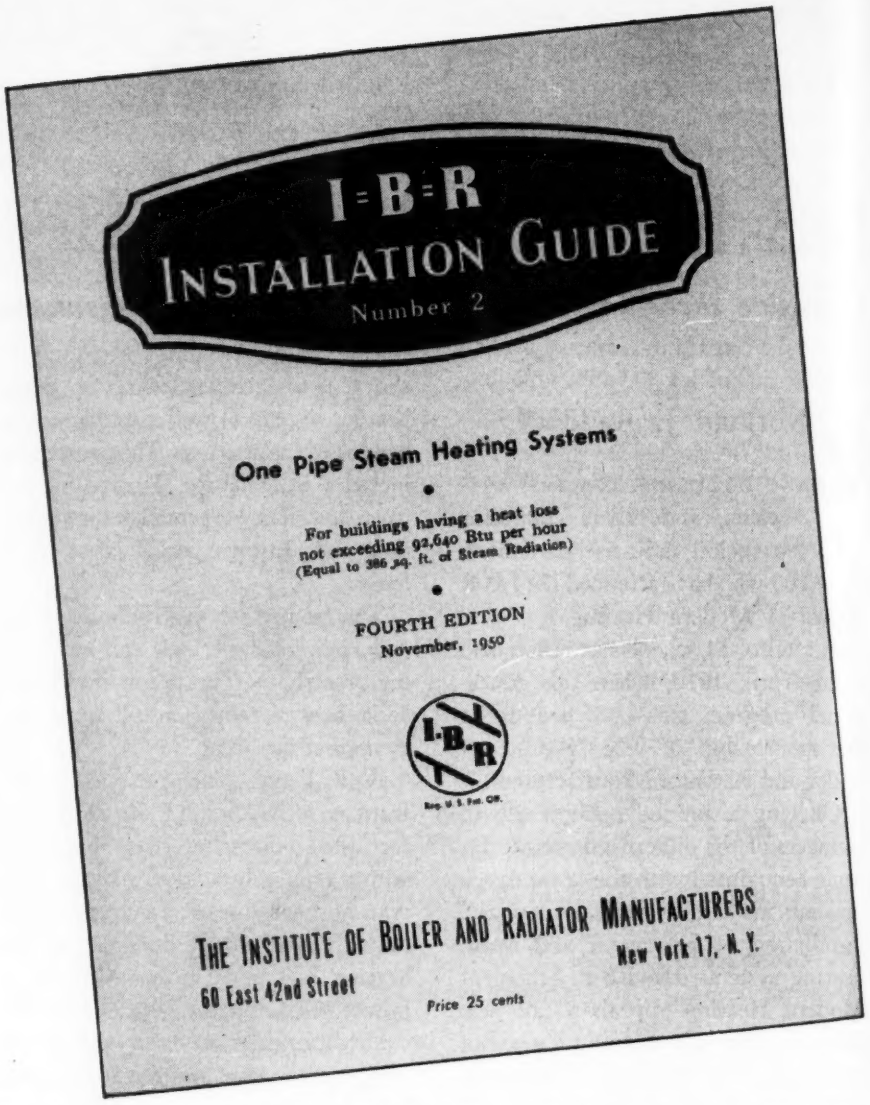
Course is well-organized

It is entirely possible, by using the methods outlined in the Guides, to effect a saving of more than $400.00 in the cost of a forced circulation hot water heating system for a typical six-room insulated house, as compared with the cost when the system is designed by old-fashioned methods.

The I-B-R School of Modern Heating is a model of organization. As previously indicated, all of the working material for the intensive three-day course, including Guides, floor plans, data sheets, etc., is assembled in a convenient binder which becomes a complete file for future reference. Instructor Wales employs the latest types of visual aid equipment including slides and movies to supplement his lectures.

The course is broken down into ten lessons as follows:

Lesson 1—After a preliminary outline of the course, examination of the Guides, forms and other working material, the class goes into the fundamentals for the use of I-B-R Guide No. 100. "Design of a One-Pipe Forced Circulation Hot Water System." This session includes heat loss calculation, discussion of Btu and temperature definitions, recommended installation practices, outline of seven design steps for the heating system under discussion.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INSTALLATION GUIDE
Number 2
One Pipe Steam Heating Systems
For buildings having a heat loss not exceeding 92,640 Btu per hour (Equal to 386 sq. ft. of Steam Radiation)
FOURTH EDITION
November, 1950
I-B-R
THE INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS
60 East 42nd Street
New York 17, N. Y.
Price 25 cents

Front cover *of one of the five I-B-R Installation Guides, this one on "One Pipe Steam Heating Systems." Others cover such subjects as: "One pipe forced Circulation Hot Water Heating Systems"; "Indirect Water Heaters"; "Baseboard Heating Systems" and "Panel Heating for Small Structures."*

Lesson 2—Under guidance of the instructor, the students calculate the heat loss and design a one-pipe forced hot water system for the I-B-R research home maintained on the University of Illinois campus. This house is a typical, well insulated, six-room dwelling with a brick exterior. Students find that, if the same installation were figured by rule-of-thumb methods the cost of material and labor would be substantially more.

Lesson 3—A new problem—calculating and designing a one-pipe forced circulation hot water heating system, but installed in a house of different construction from that used in lessons one and two. The results of this problem brings out the value of insulation in reducing the size of a system and illustrating that when the installation is calculated for an uninsulated house, the heat loss requirements are much greater, therefore more radiation is needed. Here again the I-B-R methods effect a considerable saving in material and labor.

Lesson 4—The application of various types of controls is the next discussion on the agenda, and covers the fundamentals of controls for various types of firing.

Lesson 5 — Classroom calculation and design of a baseboard heating system. Discussion of performance, selection and installation of baseboards. Layout and sizing of conventional base-

board system, using I-B-R Installation Guide No. 5.

Lesson 6—Designing a baseboard heating system with a series loop connection. A step by step outline of procedure with actual laying out and sizing of a series loop system.

Lesson 7—Using I-B-R Guide No. 2, a one-pipe steam system is calculated and designed. Function and application of controls needed for steam system is also discussed.

Lesson 8—Methods of meeting domestic hot water requirements based on I-B-R Guide No. 3, including piping connections for steam and hot water boilers and controls and a discussion of the advantages of indirect water heating. Snow removal installations are also covered in this session.

Lesson 9 — Classroom calculation and design of panel heating systems by solving a problem concerning the lay-out and sizing of floor and ceiling panels using I-B-R Guide No. 6.

Lesson 10—The course of instruction is translated into sales language and a film is presented depicting selling techniques of successful retailing.

Throughout the three-day session individual experiences and problems receive interested attention in a question and answer period following each lesson.

The results of the School of Modern Heating have been equally satisfying to the members of I-B-R and to the men who have attended. The results have been further extended to the customers of the alumni—that is, the public—who have benefited through lower costs and higher efficiency in their heating systems. The simplicity of the I-B-R tables is the key to the success of these installing methods. The time saved, the increased accuracy of the sizing preventing overloading, which, in turn, cuts installation costs have made a lasting impression on the students who have attended the course and on the associates of those students.

Testimonials from heating men with School "diplomas" best tell the story of the effect of the instruction:

"Last year, two of our men attended the first session of the School," said one heating contractor. "This year, the rest of us are here, and convinced of the accuracy and time-saving possible with I-B-R methods. We haven't had a single complaint on an installation since our boys started using the I-B-R tables last year. As for the time we save in computing jobs . . . well, about 20 minutes is all it takes to get a Btu loss with the tables, and it only takes about two hours to finish laying out the job."

Said another: "When you can run a school of this kind and convince a man like myself who has been at the business for 30 years that rule-of-thumb methods are wrong and that your way is better, I feel that the School is worthwhile."

These statements are typical, and to witness at School sessions the interest and nods of approval is doubly convincing.

The first School of Modern Heating was held in Springfield, Massachusetts, April 11, 12, and 13, 1950. Schools held subsequently have pretty well blanketed the eastern, southern, and middle-western states. In some cities a second and, in a few cases, a third school has been found necessary in order to meet the demand for this type of instruction.

Tuition for the three days is $23.00. Members of the oilheating industry who wish further information may obtain it from The Institute of Boiler and Radiator Manufacturers, 60 East 42nd Street, New York 17, New York.

SCHEDULE—I-B-R SCHOOL OF MODERN HEATING

March 4-6—Milwaukee, Wisconsin	*Federal American Legion Post*
727 East Wisconsin Avenue	
March 11-13—Ames, Iowa	*Iowa State College*
Engineering Exhibit Hall	
March 18-20—Indianapolis, Indiana	*Indianapolis Saenger Chor Bldg.*
521 East 13th Street	
March 25-27—Louisville, Kentucky	*Mulberry Room*
Hotel Henry Clay	
April 1-3—Richmond, Virginia	*Officers' Club of Virginia*
Club Lane	
April 16-18—Baltimore, Maryland	*Fifth Regiment Armory*
April 22-24—Greensboro, No. Carolina	*King Cotton Hotel*
April 29-May 1—Charlotte, N. Carolina	*YMCA*
330 Tryon Street	
May 6-8—Birmingham, Alabama	*Thomas Jefferson Hotel*
Jefferson Room	
May 13-15—Jacksonville, Florida	
May 19-21—Atlanta, Georgia	
May 26-28—Pittsburgh, Pennsylvania	
June 3-5—Rochester, New York	
June 10-12—Binghamton, New York	
June 17-19—Newark, New Jersey	
June 24-26—Hartford, Connecticut	

PAD names associate deputy Administrators

A NEW POST, associate deputy administrator, has been created by the Petroleum Administration for Defense to provide a temporary position for officials who are entering or leaving PAD. On March 1 A. P. Frame became associate deputy and C. E. Davis an assistant deputy. Then, on April 1, when Frame leaves to rejoin Cities Service Oil Co., Ed Warren, Independent Petroleum Association of America, will succeed him. Warren is slated to replace Bruce K. Brown on June 1 when Brown leaves his job as deputy administrator. Davis is to be succeeded as refining director by W. W. Keeler, Phillips Petroleum Co.

William W. Hutchinson is representing the International Heater Co., Utica 2, N. Y., in a sales capacity in Iowa, Missouri, eastern Nebraska and eastern Kansas. Previously, Hutchinson was connected with International Western Office and Warehouse Co., Chicago, Ill., as a sales representative. Hutchinson joined International Heater following his discharge from service in 1946.

Gold in some of the Hills

A new Look at the marketing Economics of fueloil operating Costs and Margins

by

Robert Gray

THERE PROBABLY HASN'T BEEN a year in the history of the fueloil business when someone didn't want to talk about margins. In the last ten years just about every oil man has wanted to talk about them. Not many trade association meetings have skipped the subject, and rightfully so, because there has been some injustice that has taken quite a time to get reconciled.

The general structure of values for the various petroleum products and the share given to each segment of the industry must be somewhere near right because they are worked out by very competent men . . . men who don't want you to go broke. They are also men who would get fired by their directors and stockholders if they gave you more than was necessary to get the distribution job done well.

But with all their brains I don't believe any of them is sure enough to declare that he has the final answer. We'd like to suggest some considerations that we believe are important enough to call for serious study.

We don't believe that present margin practices are realistic in many areas and we are convinced that this causes the small percent of hardship cases that make the headlines and the headaches. When we say small percent we have in mind that only one company in ten has margins so low that it's in any danger. Of course a larger percentage is in a sort of secondary stage . . . unhappy over its profits.

In our annual studies of fueloil distribution each December we get some fine cooperation from the marketers. A few hundred each year answer for us a great many questions from their books. Much of the material from these studies is published in the January issue of the magazine. We can't get it all out that fast, due to time pressure.

A segment of a talk delivered before the Iowa Independent Oil Jobbers Association on February 21 at Des Moines.

So this additional margin study uses more detail of those figures.

No one in the business cares what a margin is, except as it is related to his cost of operation. We'd be happy with a one cent margin if it was mostly net profit. So to keep us happy a margin must reflect the cost plus a profit.

What is your largest item of cost and the one over which you have the least control? Of course it's labor . . . wages and salaries. Truck drivers' wages represent close to 60% of delivery costs, and in markets where those wages are high your other people are well paid.

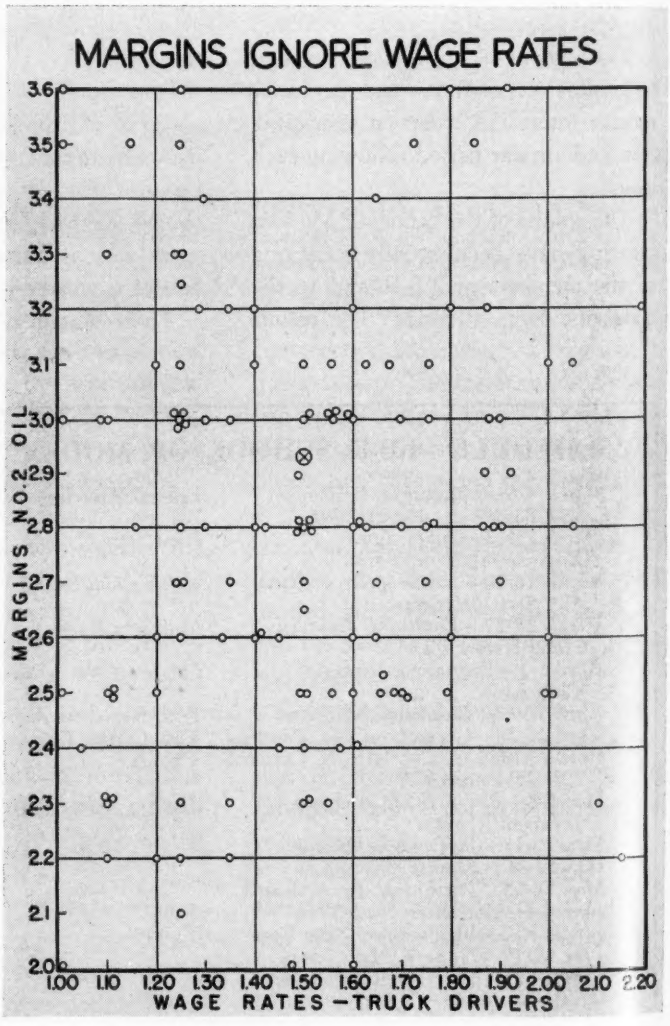
So in simple arithmetic if you're in a high wage market your total costs are high and you need high margins to make a profit. That sounds so elementary that you'd think there was no question about it. But look at the first chart with the heading, "Margins Ignore Wage Rates." Did you ever see such a hodgepodge . . . did you ever see anything so far from making a pattern? The dots represent a random sampling of fueloil marketers from all over the country, based on their experiences last year.

At the top we see the margin line of 3.6¢ and at the bottom 2.0¢. Actually those were not the extremes. One company had 4.4¢ and one 1.75¢. These of course are all on No. 2 heating oil.

Notice that the 3.6¢ marketers paid their truck drivers anywhere from $1.00 to $1.93 an hour, so the overall operating cost of the high man would be close to double that of the company with the dollar rate.

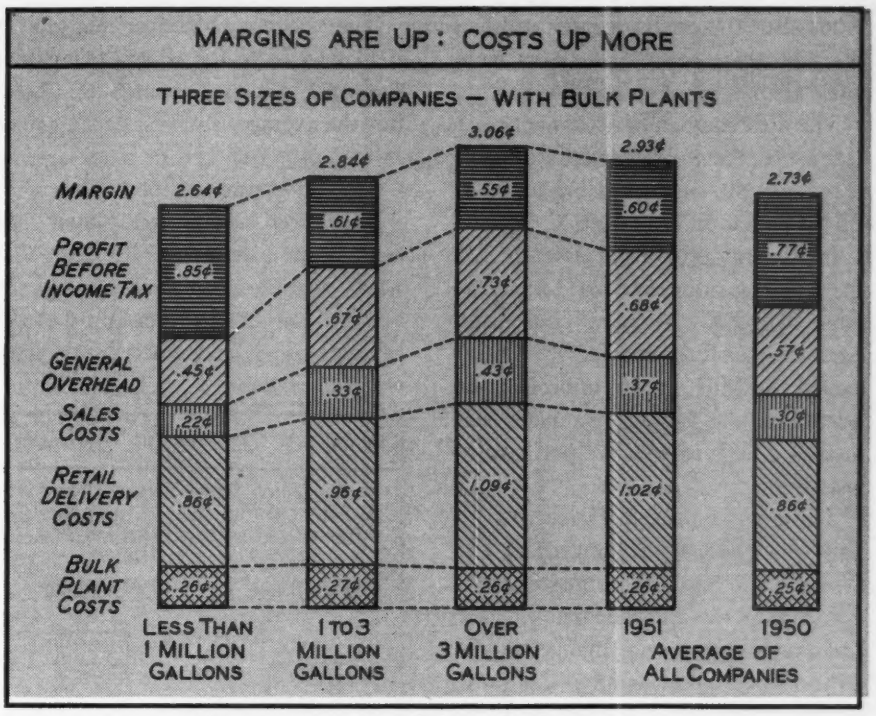
Then along the 3¢ margin line driver wages ranged from $1.00 to $1.90. The 2.5¢ margin companies paid anywhere from $1.00 to $2.00 an hour, and near the bottom of the chart we see one marketer with a 2.3¢ margin having to pay $2.10 for his drivers.

Notice that the greatest number of dots show margins ranging between 2.8¢ and 3.0¢. The weighted average point of the whole group is shown by the X. It's a margin of 2.93¢ at a wage rate of $1.50. At that point the operator earned 6/10¢ a gallon net before income taxes.



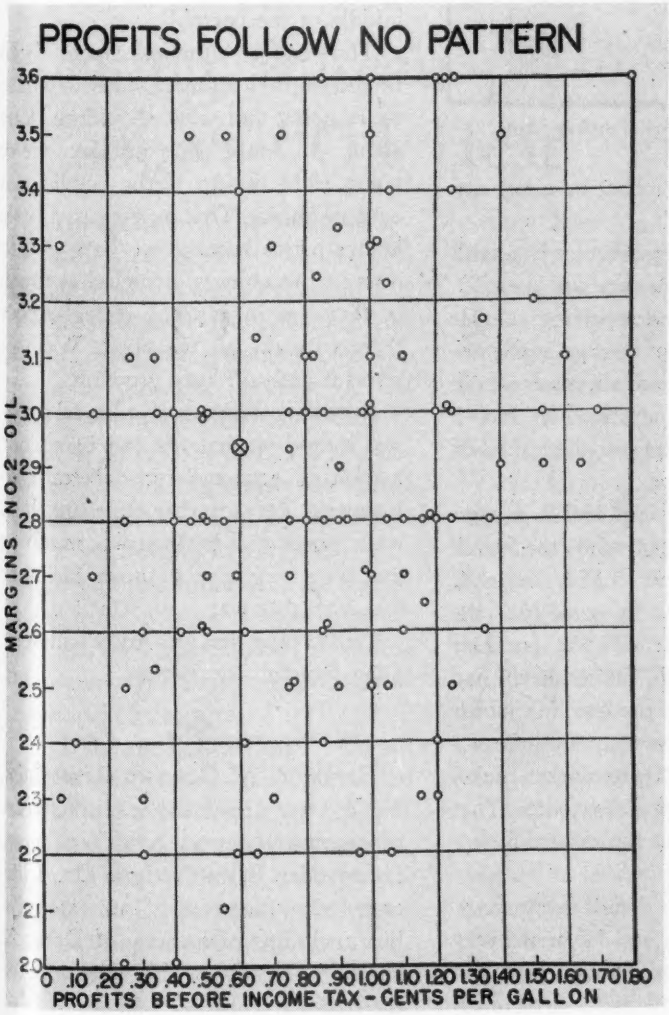
This chart brings into serious question the long-held theory of uniform margins over wide sections of the country. Of course they are not actually uniform as we'll see later, but anyway that's the philosophy that we as an industry have been trying to support.

If we now propose that we abandon the uniform margin basis and agree to adjust the margin in each trading area to reflect the prevailing wage rates we would certainly be moving in the direction of common sense, but we would be stepping on the toes of you men who have low wage rates and enjoy life under a uniform margin umbrella. We would be helping those of you at the other end of the scale, the ones that are feeling the pinch, the ones that are causing the ruckus in the Small Business Committees in Washington and other places. In the interest of fair play, we would favor making the adjustment.



This chart is reprinted from the January issue.

The second chart shows that for a variety of reasons, "Profits Follow No Pattern." The wage condition is one of the important reasons. Again, good management or bad management play a significant part. The size of the company has a lot to do with it. Big companies don't do as well under today's margin conditions as smaller ones. But I'd like to ask, "Do we have anything to talk about when we take the categorical position that margins aren't high enough? What margins aren't high enough?"



Notice that companies with 3.6¢ margins earned anywhere from .85¢ to 1.80¢; the 3.0¢ margin companies had profits as low as .16¢ and as high as 1.70¢; those fueloil men with 2.8¢ margins enjoyed profits, or maybe they didn't, all the way from .25¢ up to 1.37¢. Near the bottom of the chart we have one company earning net half of its margin which was only 2.4¢. Again the X shows the weighted average point, 2.93¢ margin and .60¢ profit before income taxes.

We can begin to see why some fueloil marketers live in Colonial mansions and some don't. Maybe they married the money.

The third chart is one we used in our January issue but it belongs in this discussion. It brings out the differences in operating costs between companies of various sizes. They're divided into three groups: those selling under one million gallons of No. 2 oil; those selling one to three million; those selling over three million.

First notice that larger companies, on the average, do get larger margins by one means or another. A few of them get it by selling above the posted market; some get special deals because their volume is so desirable; some others buy all or a part of their oil in the spot market and have large enough storage to take advantage of summer bargains. But however it comes about, we found in this study, and in each previous year that we have asked these questions, that margins trend upward with size of marketers. Here we see the small size group with average margins last year of 2.64¢; the middle group had 2.84¢ and the large company group had

3.06¢. But the small operator still had the advantage because his costs were more than correspondingly lower.

The little company earned net before taxes .85¢; the middle sized bear netted .61¢ and the big operator averaged .55¢ a gallon on No. 2 oil.

It was only on bulk plant costs that the three groups showed about the same figure. On delivery costs, sales costs and general overhead the figures moved upward in an unbroken sequence as the average company size increased. The reasons are not hard to visualize.

The most efficient operation you can find is a one-man organization. The owner is the boss and he masterminds everything. He tells the truck driver and the burner service man where to go and what to do when they get there. Between times he works to keep his friends around the town loyal and makes all the new ones he can. For him to make a larger profit per gallon is ideal . . . he earns it and he has a pleasant living, and we wouldn't like to see that situation upset.

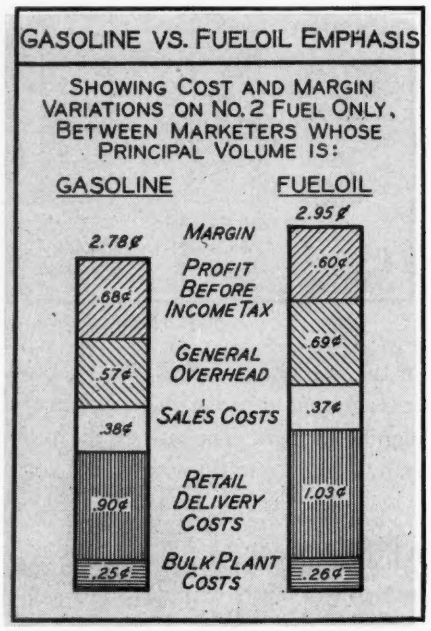
The company grows. It adds dispatchers and sales managers, accountants instead of a bookkeeper (and the difference between those titles is $3,000 a year) and as the company grows up . . . so do costs per gallon. It's any man's choice, but he should know that when he gets big he won't make as much per gallon in spite of the higher margins that he may wangle.

Notice in the last two columns of the chart that the profit situation deteriorated a little in 1951 from 1950. The average net dropped from .77¢ per gallon to .60¢.

Fueloil vs. Gasoline

The final chart is also reproduced from the January issue. It covers a point much debated in the Midwestern states. It has been argued with some merit by the major suppliers that the reason Midwest margins average lower than the rest of the country is that in those states most of the heating oil is sold by companies also in the gasoline jobbing business and a number of their costs are spread over several products. Our findings support that view though perhaps not to the degree that some would believe.

The average Midwest margin in 1951 was 2.79¢ for all size companies against a national average of 2.93¢. But the average Midwest earnings per gallon was .84¢ before taxes against a national average of .60¢. Thus with a .14¢ lower margin you earned .24¢ more. Your average operating cost was 1.95¢ against a national average of 2.33¢. Now those figures apply to the Midwest as a whole, whether you were a typical gasoline jobber or a big city fueloil distributor.



Reproduced from January issue.

This chart is on a different basis and I think it better answers our question. We took all of the reporting companies whose principal business was gasoline, separated from all those whose largest dollar volume was in No. 2 fueloil. These were from all sections of the country.

The gasoline group had a margin on No. 2 oil of 2.78¢, while the fueloil specialists averaged 2.85¢, or .17¢ higher margins. At the same time the gasoline group earned .68¢ on their No. 2 oil while the fueloil group had .60¢. Thus it cost the gasoline jobber under national average conditions a quarter of a cent less to market fueloil than it cost the fueloil distributor. That is apparently about the right differential to recognize.

You'll notice the details in the chart. The gasoline man had lower delivery costs because he could use his trucks the year round and had less turnover of drivers as well as spreading his depreciation. His sales cost was actually one point higher than the fueloil man, which is understandable because the gasoline man is accustomed to more spectacular promotion.

The gasoline man's overhead is considerably lower per gallon, because he spreads the rent and the office staff over a more consistent year-round billing. This all seems fairly clear.

Sometimes our fueloil marketing industry seems quite simple. You get an order, deliver it and collect. But that concept is a mirage. Perhaps its very simplicity of physical operation makes its economics the more complex.

In the good old days before the war heating oil was practically a dump product; there was too much of it and you could make most any kind of a deal with a little effort. But year after year we keep growing in demand, growing much faster than gasoline and now we've become the second major product, very important and fairly high priced. As speakers have often said, "We've had growing pains in the middle of the barrel."

The major suppliers have been forced to give a lot more study to where we're going and what should be done about it. Make no mistake, we're going right on up if the public can have its choice. That may mean a little higher prices because we have got to interest the refiners in fueloil as much as they are in gasoline if we expect them to make all we want. We can stand it and still keep growing.

But along this path of splendid progress should we not try and bring our marketing economics into better adjustment? I'm sure that your suppliers want peace and harmony as much as you do . . . you're so much easier to live with that way.

I am hoping that this study will start some fruitful arguments.

❖

Harold A. McDermott, Rensselaer, N. Y., was appointed manufacturers representative, upper New York area, for Madden Brass Products Co., Chicago, manufacturers of an extensive line, including oilburners. McDermott has sold actively in this territory for the past 18 years.

TIMES
New Brunswick, N. J.
October 11, 1951
Claim Outlook On Oil Heating Is Favorable
Stocks of Fuel Oil on Hand and Equipment Held Adequate
COURANT
Hartford, Conn.
September 30, 1951
Bureau Hopeful For AmpleSupplies Of Fuel Oil Stocks
JOURNAL
Milwaukee, Wisconsin
October 7, 1951
Fuel Oil Picture Good, Is Report
LIFE
Cicero, Illinois
October 17, 1951
OIL SUPPLY FUTURE IS BRIGHT
DEMOCRAT
Johnstown, Pa.
October 8, 1951
Stock of Fuel Oil Held to Be Adequate
WORLD
Aberdeen, Washington
October 15, 1951
Winter Season Fuel Oil Supply Thought Ample
JOURNAL GAZETTE
Ft. Wayne, Indiana
October 21, 1951
National Fuel Oil Picture Rosy, Report
JOURNAL
Providence, R. I.
September 23, 1951
Adequate Heating Oil, Equipment Seen
CHRONICLE TRIBUNE, Marion, Ind., Oct. 21, 1951
Fuel Oil Supply Now In Good Shape; Home Owners Urged to Fill Tanks
LIFE
Sticknay, Illinois
October 17, 1951
OIL SUPPLY FUTURE IS BRIGHT
CITIZEN PATRIOT
Jackson, Michigan
October 7, 1951
Fuel Oil Users Urged To Have Tanks Filled
TRIBUNE
La Crosse, Wis.
October 27, 1951
Fuel Oil Seen In Good Stock, Bureau Reports
NEWS SUN, Waukegan, Ill., Oct. 23, 1951
Fuel Oil Situation Reported As 'Good'
TIMES
Trenton, New Jersey
October 28, 1951
Fuel Oil Users Urged to Have Tanks Filled
POST
Boston, Mass.
October 7, 1951
Fuel Oil Users Urged To Have Tanks Filled
OBSERVER
Fayetteville, N. C.
October 6, 1951
Favorable Report On Fuel Oil Given
STAR
Peekskill, N. Y.
November 2, 1951
Oil Users Urged To Fill Fuel Tanks
Storage Stocks Are Below Demand
NEWS
Ann Arbor, Michigan
September 22, 1951
Fuel Oil Supply Said To Be Good
PRESS
Grand Rapids, Michigan
October 13, 1951
Oil Supplies Seen Ample
Householders Need Not Fear Shortage
TIMES
Bay City, Michigan
September 23, 1951
Fuel Oil Users Urged to Have Their Tanks Filled
EAGLE GAZETTE
Lancaster, Ohio
September 24, 1951
Fuel Oil Users Urged To Have Tanks Filled
HERALD
Grand Rapids, Mich.
October 7, 1951
Fuel Oil Stock Outlook Good
Supplies in Storage Said Adequate OK Heating Season
REGISTER
New Haven, Conn.
October 7, 1951
FUEL USERS URGED TO HAVE TANKS AND BINS FILLED NOW
NEWS
Cleveland, Ohio
October 17, 1951
Winter Oil Supply Seen Adequate for Home Use
TIMES, Salisbury, Md., October 13, 1951
Oil Heating Equipment Supply Adequate For 1951-52 Season
GLOBE, Boston, Mass., Sept. 30, 1951
Over-All Fuel Oil Picture Looks Good
R. E. ADVERTISER
Chicago, Illinois
October 26, 1951
Oil Users Urged to Fill Tanks Now
BANNER NEWS
Belding, Michigan
October 18, 1951
Fuel Oil Users Urged to Have Tanks Filled
THE MD. MASTER PLUMBER
October, 1951
Fuel Oil Users Urged To Have Tanks Filled
TIMES, Watertown, N. Y., October 27, 1951
Fuel Oil Users Are Urged To Fill Tanks Now

Heating Bureau presentation shows "Oil Heat" Publicity

THE PLUMBING AND HEATING INDUSTRIES BUREAU, Chicago 1, Ill., an impartial agency interested in the promotion of the plumbing and heating industries, presented before the quarterly directors' meeting of Oil Heat Institute of America in Cincinnati, O., January 24 and 25, a summation of their activities directed towards a better understanding by the public of the oil heating industry.

The OHI is a member of the bureau whose membership consists of national and sectional associations of manufacturers, wholesalers, contractors, and individual contractors.

C. E. Lewis, Perfex Corp., Milwaukee, Wis., represents the OHI on the bureau's 20 man non-salaried board of directors. Other representatives of interest to the oilheating industry include: Jack Cooper, past president of the Plumbing and Heating Bureau; E. A. Cline, The Trane Co., representing the Convector Manufacturers Association; John M. Dumser, Wolverine Tube Div., representing the Copper & Brass Research Association; Arnold H. Goelz, Kroeschell Eng. Co., representing the Heating, Piping and Air Conditioning Contractors National Association; Earl J. Gossett, Bell & Gossett Co., representing the Hot Water Heating Specialty Manufacturers; E. M. Palmer, Kewanee Boiler Corp., representing the Steel Boiler Institute and E. R. Westphal, Weil-McLain Co., representing the Institute of Boiler and Radiator Manufacturers.

Officers of the bureau are: Earl E. Brown, president; Arnold H. Goelz, vice-president; Geo. O. Toepfer, treasurer and Norman J. Radder, secretary.

The bureau supplies newspapers, press associations and syndicates with releases at frequent intervals and assists editors in the preparation of special stories. The picture above was part of its "Building Public Confidence in Oil Heat" exhibit, shown to OHI directors on how one bureau release was handled and carried by dozens of newspapers throughout the country. Note not only the broad coverage obtained for the oil heat industry with this release, but also the quality of the readership as indicated by the names of the newspapers.

Obviously newspaper editors are friendly to oil heat and are willing to meet the industry more than halfway in calling the attention of their readers to matters of interest.

Magazines are also used extensively by the bureau and these periodicals look to the bureau for articles.

Part of its function is that of an educational agency for the plumbing and heating industries. It assists publishers of books and encyclopedias in preparing editorial material, in revising and checking articles, and aids in insuring the accuracy of references. Also copies of the bureau's booklets and reprints of magazine articles are sent free of charge to libraries of all types thus multiplying many times the readership of its material. More than 400 of the largest city, college and university libraries have requested this material.

Modernizing two-pipe steam Plants

Second Article on weeding fuel-wasting Defects from big Systems

by
J. W. Schulz

The first article on this subject appeared in the February issue of FUEL-OIL & OIL HEAT *and explained the importance of proper attention to the thermostatic traps in a two-pipe steam heating plant. Orifices for the radiator feed valves were explained; in many systems they are necessary for proper distribution of steam to all the radiators. Understanding the following article does not depend on this, but if you install or service burners that fire two-pipe steam plants you should read the article on this subject that appeared in the February issue.*

THERE'S GLORY in having your oilburners heat the biggest buildings in town. A millionaire who is ordinarily cautious and wary recently grabbed the pen and signed the contract for the purchase of air conditioning equipment after being told the manufacturer of the equipment was responsible for air conditioning the biggest steamships, hotels, skyscrapers, and diamond mines in the world. A company manifestly able to handle these big installations seemingly could not go wrong on a simple domestic installation!

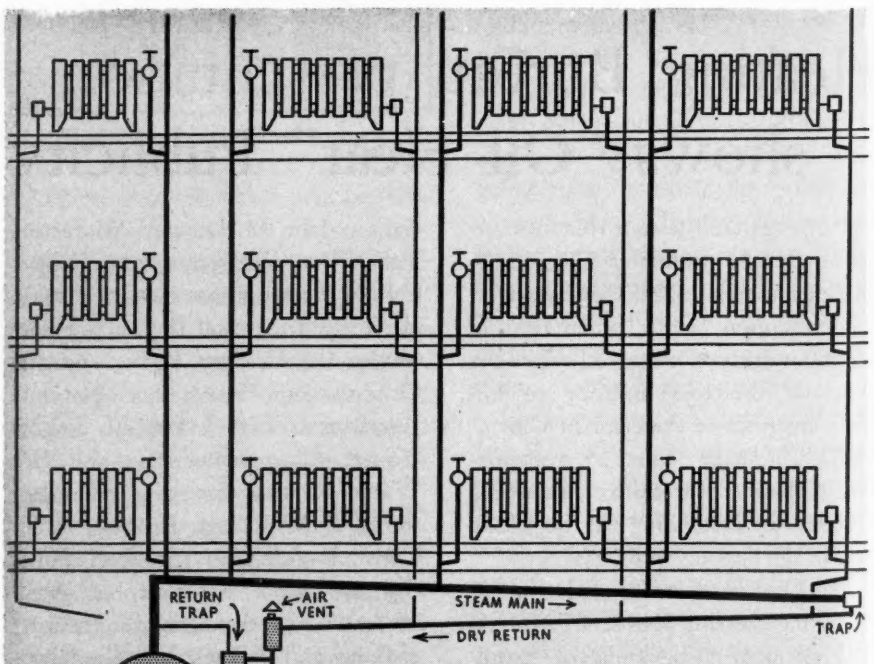
John Jones, owning a modest five-room bungalow, similarly may be more willing to let you solve his heating problems after he learns that your oilburners are heating the biggest buildings in your locality.

On this basis of gaining glory and demonstrating he can handle the biggest heating problems in town, the typical domestic oilburner dealer keeps dreaming of installing commercial and industrial burners. Ordinarily he may install 50 to 100 oilburners a year for firing rates between .85 and 3.0 gph. He itches to get the big outstanding job that involves a burner which fires, say, more than 5.0 or 10 gph.

Realizing his dream and getting the contract to convert to oil the local hospital, high school, largest apartment house, or factory, a domestic burner dealer often finds that a two-pipe steam heating plant is involved. In many cities, almost all of the larger buildings that need firing rates above 5.0 or 10 gph are heated by two-pipe steam plants.

To produce the extremely low oil bills that the burner dealer can boast of, the oilburners installed in this big building have to work hand-in-hand with the two-pipe steam heating plant in the big building. If on a mildly cold day the oilburners run for seven minutes, for example, and then stay idle for 30 minutes, every radiator in the big two-pipe steam plant should become slightly and properly warm. This type of performance on the part of the heating plant is necessary for the success of the oilburners, but depends of course on the excellence of the heating plant. To make his big oilburners work properly and efficiently, then, the burner dealer has to buckle down to weeding out any defects or shortcomings he finds in the big heating plant. Thermostatic traps usually need much attention, in two-pipe heating plants that are more than ten years old and that have not been maintained especially well. To perform excellently, and in some cases even passably well, when fired by on-off oilburners, certain big steam heating plants need to have orifice plates installed in every one of their radiator feed valves.

To put in excellent condition a two-pipe steam plant of moderate size, using 10,000 to 20,000 gallons of oil a



Diag. 1—*Don't install an oilburner in a steam plant that's been in use more than ten years without worrying about proper operation of the entire heating plant! If your burner runs seven minutes and then stays idle 30 minutes on a mildly cold day, every radiator should heat slightly. The success of your oilburner depends on this, but only a modern steam heating plant in excellent condition can give such performance. Because of heating plant defects, many big oilburners maintain steam pressure almost continuously throughout the heating season. Terrific waste of oil is the result. But heating plant defects must be eliminated before proper on-off firing can be used. This point is highly important to equipment dealers specializing in temperature control systems designed especially for largest buildings.*

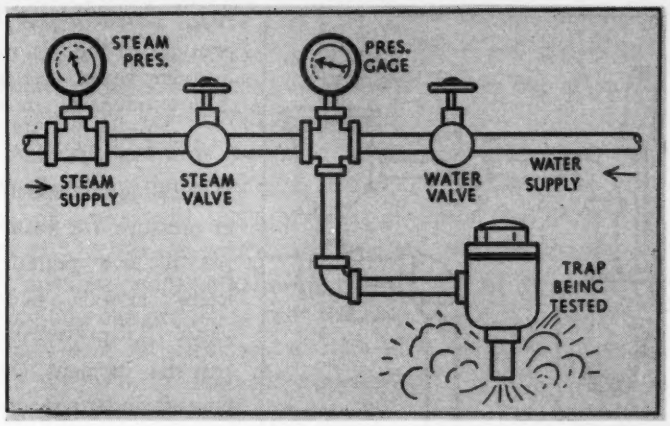
year, may take a week's time for a team of service men or pipefitters. Bigger jobs take more time. Testing the 700 traps of a certain five-year-old heating plant, because it is certain that at least 100 traps are bad and are the cause of the dry returns being filled with steam at five pounds pressure, is right now taking the time of a steamfitter and his helper for at least one month. As is usual, the men cannot work continuously at checking the traps, of course. The buildings involved need heat, and only small sections of the heating plant can be shut down at a time.

Traps, like the 13 thermostatic traps in Diag. 1, must work properly to permit proper operation of the oilburner that fires the system.

When they are cold, thermostatic traps must be open to permit air and condensate to escape from the radiators or steam mains served by the traps. When heated roughly to about 200°F. (and with atmospheric pressure on them), thermostatic traps are supposed to close more or less tightly to prevent the flow of steam into the dry returns of the heating system. The thermostatic elements of the traps give trouble in heating plants that have been in use for years. Usually the trap element that fails causes the trap to stay open when it should be closed. Putting a neglected heating plant into excellent condition therefore includes finding and replacing the defective traps, which do not open and close as they should.

True, you can learn much about the performance of a two-pipe steam plant equipped with thermostatic traps by maintaining appreciable pressure on the boiler (say a minimum of five pounds gage pressure) and going through the building making an expert, detailed inspection of the heating plant. Steam-filled returns show up. Pounding in supply and return lines, bubbling of water in pipes and radiators, and failure of certain radiators to heat may prove there's trap trouble. Experts can sometimes point out leaky traps with certainty.

However, a layout similar to the one in Diag. 2 often is used by experts to check all the thermostatic trap elements in an old, neglected system, and to make certain that the project will end with every defective trap element removed and replaced.



Diag. 2 — *Layout for through testing of thermostatic trap elements. The idea behind this is to test every trap element used in a large building, and to wind up with only traps definitely able to open and close properly.*

You might start out using the rig in Diag. 2 by bringing in a bushel basket full of about 36 trap elements which you have removed from the old system for testing. Perhaps you've replaced these 36 questionable trap elements by 36 new ones to get started with your project and to avoid unnecessary running back and forth. Starting with a few dozen new trap elements on hand also avoids cutting off the heat for long periods in cold weather.

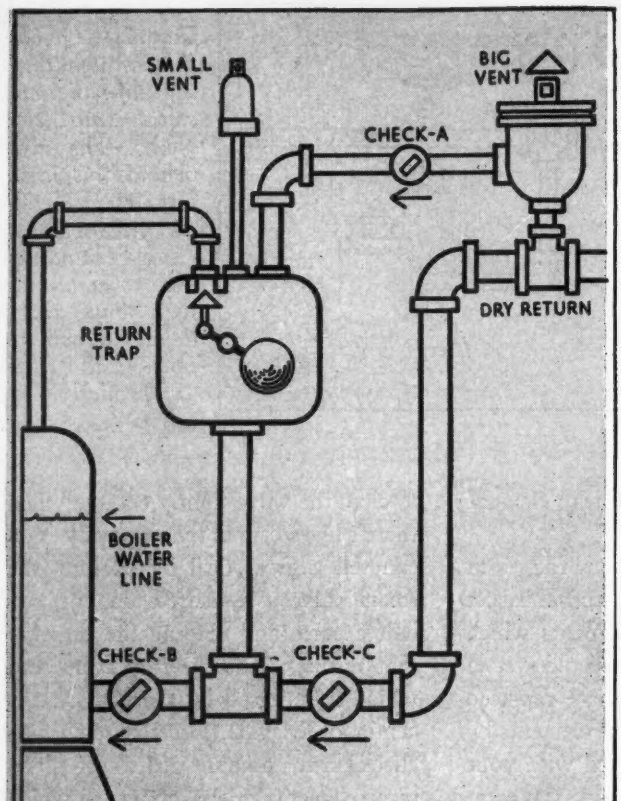
The testing rig in Diag. 2 obtains cold water from the regular cold water supply line in the building, and steam under steady pressure from any boiler that can be arranged to provide this. A supply of steam is needed, and can come from the heating boiler on the job, or from a steam boiler in your shop or showroom. A continuous pressure of between two and five pounds is suitable, and is reported by the steam gage at the left side of Diag. 2.

Keeping the same trap body in your testing layout, you screw in one thermostatic element after the other to do your testing. You discard the elements which prove defective, and set aside the elements which test Okay; these you'll mark in some way and put back in the heating system.

Testing a trap element is simple. You open the cold-water valve, observing that when cold the trap is open. Use a bucket to catch the water coming out of the pipe at the bottom of the trap, or arrange the entire test rig to be over a sink or drain arrangement. Then you close the cold-water valve and open the steam valve, checking on the ability of the thermostatic element to close the valve tightly enough when there's live steam in the trap body. You can tell a great deal by opening the steam valve a measured amount, say half a turn, and reading the pressure that results inside the trap body, and which is reported by the gage in the center of Diag. 2. Use that device to check on the amount of leakage given by an element which is active but which does not give tight closing. The amount of steam that escapes from a trap that fails to close tightly can be observed in addition, of course. Use the center pressure gage also to make certain that, in opening the cold-water valve, you do not under any conditions put excessive water pressure on a trap element. Ten pounds is a good maximum pressure.

Burner dealers newly interested in two-pipe steam heating plants often have questions about how condensate flows from dry returns or wet returns under practically no pressure into steam boilers carrying perhaps five pounds gage pressure, with only the help of the type of return trap shown in Diag. 1. Naturally you've got to understand this if you want to be an expert at two-pipe steam heating.

Diag. 3 tells the story of how a return trap works. To start out, condensate flows from the dry return to the boiler by gravity and without the help of the return trap, when there's only ounces of steam pressure on the boiler. The level of water in the vertical pipe at the right of the drawing can come up to the level of the bottom of the return trap, building up enough pressure to offset a slight steam pressure in the boiler and causing the condensate to flow continuously through



Diag. 3—*With five pounds pressure on this steam boiler and no pressure in the dry return, this return trap "pumps" condensate into the boiler, one batch at a time. When the return trap fills with condensate, its valve snaps open and steam is admitted to the trap from the boiler.*

check valves "B" and "C." This occurs at least 90% of the time in some systems that operate most of the time under slight steam pressure; in these systems, the return traps go into action only infrequently, at times of almost continuous operation of the oilburners.

The three check valves in Diag. 3, marked "Check," open only in the direction indicated by their arrows.

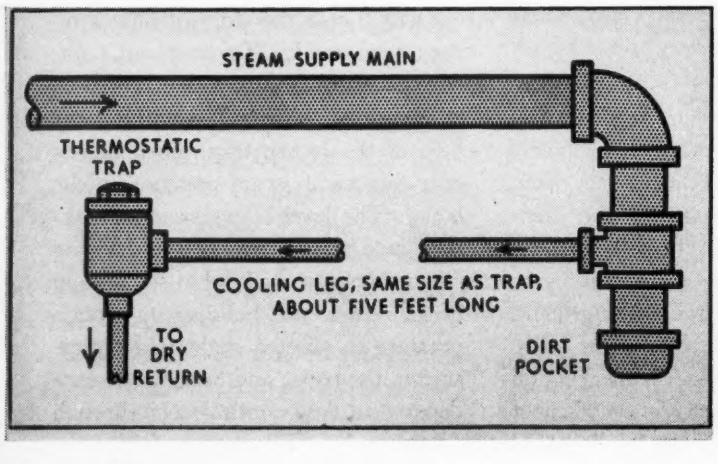
Building up the boiler pressure, for example to five pounds, keeps closed check valve "B," preventing for the moment the flow of condensate into the boiler from the dry return line, which can be considered as having zero pounds gage pressure. Continuing to flow through check valve "C," condensate accumulates in the return trap and tends to raise the float located there.

The float valve in Diag. 3 is in the closed position because the float is low in its chamber. Actually this is a snap-acting type float valve; the valve snaps shut when the float gets near its lowest position, and snaps wide open instantly when the float rises to its highest position.

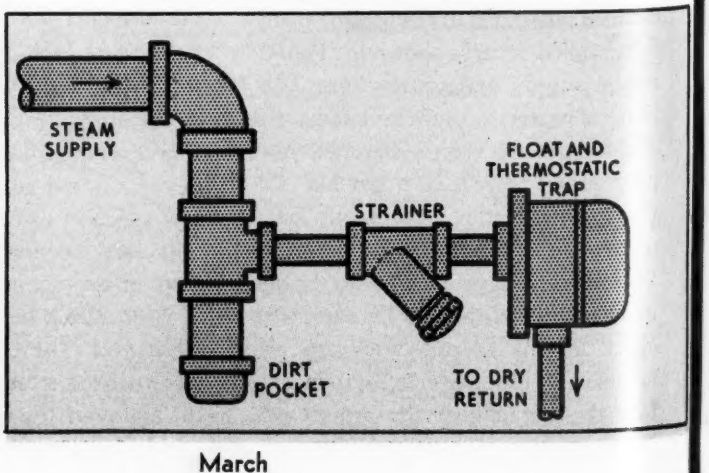
Unable to flow into the boiler, then, because of low pressure or no pressure in the return lines and five pounds pressure on the boiler, the condensate (returning continuously from the radiation) accumulates in the return trap. When it reaches a certain level, the condensate causes the float to rise high enough to snap open its valve, and boiler pressure is imposed on the return trap because of a flow of steam through the line from the top of the boiler to the left-hand top of the trap. With the same pressure (five pounds) on the trap and the boiler, the condensate in the return trap flows into the boiler through check valve "B." Check valves "A" and "C" are closed for the moment, preventing flow of steam from the boiler to the dry return system. The small air vent serves only to prevent the return trap from becoming air-bound. The large vent serves as the vent for the entire system of radiation and supply and return piping.

Diag. 4 emphasizes that a thermostatic trap, used to clear a steam main of air and condensate, needs a cooling leg, and that this cooling leg should not be insulated. If it opens only when below 200°F., a thermostatic trap connected directly to a steam main would remain closed with the main full of live steam under pressure, and would not drain condensate properly from the main. Different trap manufacturers have different ideas regarding the proper minimum lengths of cooling legs, needed for thermostatic traps con-

Diag. 4—*Don't insulate the cooling leg provided for a thermostatic trap supposed to drain condensate from a steam main! The thermostatic traps used for steam-type unit heaters usually need similar cooling legs. Reason: kept hotter than about 200°, this type of trap remains closed.*



Diag. 5—*Combination float-type and thermostatic-type trap, often used to drain condensate from steam main, rapidly and without the use of a cooling leg. There are many kinds of traps in wide use today, and the up-and-coming burner dealer should learn all about all of them.*



nected to steam mains. When in doubt, try to obtain specific instructions from the manufacturer of the trap.

Diag. 5 shows the use of a combination float-type and thermostatic-type trap, to drain a steam main of condensate rapidly and without the use of a cooling leg. This has two valves in parallel so that opening either opens the trap. Even with the trap at the steam temperature that keeps closed its thermostatic element, the float-controlled valve in the trap will open wide when the trap fills with condensate.

Diags. 4 and 5 show dirt pockets, and Diag. 5 shows in addition a strainer located before the trap. There's lots to learn, for the oilburner dealer newly interested in two-pipe steam plants, about these and other niceties in connection with the proper use of traps. The best thing such a dealer can do is start a campaign to learn the hundred and one important trap pointers that can be gathered from a study of the best technical literature issued by the leading manufacturers of specialties for two-pipe steam plants.

NPC announces Results of its tank wagon Census

ALMOST 30 BILLION GALLONS of petroleum covering approximately 817 million miles were hauled by 1,063 for-hire carriers in the United States in 12 months ending June 1, 1951, according to a report made by the National Petroleum Council, Washington 6, D. C. 23,153 private and for-hire general purpose tank trailers and semi-trailers operating as of June 1, 1951, had an average capacity of 5,225 gallons or a total capacity of 120,978,635.

If wartime measures were adopted, such as 24 hours per day operations, seven days per week, reciprocity as to various state laws and regulations, the freer use of interchange of operating rights, and the fleet maintaind at its present size and kept in good operating condition, the committee is of the opinion that existing capacity could be increased approximately 35%.

At the request of the Oil and Gas Divison, Dept. of Interior, the Committee on Petroleum Transportation conducted a tank truck census which was prepared by the Subcommittee on Tank Truck Transportation.

The census includes all for-hire tank trucks in petroleum, chemical and liquefied petroleum gas service, private tank trucks in petroleum service and private tank trucks in chemical service.

The census indicates that the nation's for-hire tank truck fleet is owned and operated by 1,063 individuals or companies who operate 10,613 general purpose tractor-semi trailer units, 2,875 trains consisting of a straight truck and a full trailer or a tractor-semi and full trailer. These latter units are commonly known in the industry as double bottoms. This is a total of 13,488 general purpose units with a total carrying capacity of 73,024,635 gallons with a national average of 5,414 gallons each. Pressure equipment consisted of 140 units designed to operate at 100 lbs. pressure or less, 399 units designed to operate between 100 and 300 lbs. pressure, and 27 units designed to operate at pressures in excess of 300 lbs. for a total of 506 pressure units with a total water capacity of 2,580,252 gallons and an average capacity of 5,099 water gallons.

General purpose tank trailers and semi-trailers in petroleum service as of June 1, 1951 totalled 9,665 with an average capacity of 4,961 gallons and a total capacity of 47,954,000 gallons.

Total Census—Private and For-Hire
General purpose tank Trailers and Semi-Trailers*

	No. of Units June 1, 1951	*Average Capacity (Gallons)*	*Total Capacity (Gallons)*
DISTRICT I			
Private Carrier	3,774	4,701	17,741,000
For-Hire Carrier	4,957	4,707	23,333,257
Total	8,731	4,704	41,074,257
DISTRICT II			
Private Carrier	3,386	5,017	16,988,000
For-Hire Carrier	4,409	5,752	25,362,124
Total	7,795	5,433	42,350,124
DISTRICT III			
Private Carrier	1,201	4,642	5,575,000
For-Hire Carrier	1,611	4,947	7,969,223
Total	2,812	4,817	13,544,223
DISTRICT IV			
Private Carrier	196	5,939	1,164,000
For-Hire Carrier	747	6,284	4,694,374
Total	943	6,212	5,858,374
DISTRICT V			
Private Carrier	1,108	5,854	6,486,000
For-Hire Carrier	1,764	6,613	11,665,657
Total	2,872	6,320	18,151,657
U. S. Total for Private Carrier	9,665	4,962	47,954,000
U. S. Total for For-Hire Carrier	13,488	5,414	73,024,635
U. S. Grand Totals	23,153	5,225	120,978,635

*Does not include LPG, chemical or other type trailers.

NOTE: The foregoing table shows the combination of the private and for-hire general purpose tank trailer and semi-trailer fleets arranged by Petroleum Administration for Defense Districts.

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H. S. M. Burns, president, Shell Oil Co., New York 20, N. Y., has been appointed chairman of the public relations committee of the board of directors, American Petroleum Institute, New York, N. Y. The public relations committee is the board group to which the Oil Industry Information Committee reports.

All In A Lifetime
Penalty Of Progress
EVERY HOUSE ON THIS SIDE OF THE STREET BURNS OIL IN THEIR FURNACES, SO NONE OF 'EM HAVE ANY ASHES TO SPREAD UNDER OUR WHEELS.
NO, WE DON'T EVEN HAVE A SHOVEL...THE ONLY HOUSE THAT I KNOW OF WITH A COAL FURNACE IS THE NEHERS', BUT THEY WENT SOUTH THIS WINTER
I TOLD HIM HE SHOULD'VE PUT ON THE CHAINS JUST IN CASE WE GOT CAUGHT ON SLIPPERY ICE
2-2

Cartoon by Frank Beck. Reproduced by courtesy of McNaught Syndicate, Inc.

Block that Slide

Wisconsin Marketer gives his Customers Sand

THE CARTOON BY BECK appeared in the Doylestown, Pa., *Intelligencer* on February second. A syndicated feature, it appeared in a lot of other papers over the country on that same day. The incident brings to mind an activity of the Pugh Oil Co. of Racine, Wisconsin, that has been going on for a number of years. Harry S. McGaughey, general manager of the company, got the idea that when customers switched from coal to oil they gained a lot of advantages in better living, but they sacrificed the advantages of ashes for slippery winter sidewalks.

Always an alert merchandiser, McGaughey started giving each fueloil customer a bag of sand in the fall season, labeled "Sidewalk Sand" and carrying the explanation that it is another service for customer satisfaction. These sand bags weigh 25 pounds and cost 28¢ each complete, the bags printed, filled and delivered to the bulk plant at that price.

The regular truck drivers leave a bag at each home they serve as they make their first drop in the fall. If something goes askew and the sand is overlooked the customer gets on the telephone the first slippery day.

This sand deal is one of quite a few imaginative merchandising ideas of McGaughey through the years. As a result Pugh Oil is a big company in a small city of 78,000 population. Operating nine trucks on No. 2 oil, three on No. 1 oil plus two contract drivers on that light fuel, and three over-the-road transports, the company is one of Indiana Standard's strongest jobbing accounts. Gasoline is also sold at 12 company stations in Racine, so the Pugh Oil name is very conspicuous about the city. However, the gasoline volume is only a third that of fueloil.

One unique feature of McGaughey's business is that with so much fueloil activity it does not sell oilburners. It cooperates with all of the burner dealers in town unless of course they also sell oil. Pugh Oil carries a large stock of fueloil tanks of all popular sizes, supplies these to the burner dealers at close prices.

This cooperation, coupled with very effective direct sales and advertising activity has caused McGaughey's gallonage to grow amazingly. In both 1950 and 1951 the company added over 1,200 new heating oil accounts . . . in each year. Ninety per cent of those were new fueloil users; they had just gotten their burners. A thing like that can happen only in a community where one oil company so dominates public acceptance that the burner and oil tie-up becomes less significant than it is in most markets.

It was 101 years ago that the Pugh family started in the coal business in Racine. Today they have a half mile of mountainous coal piles stacked up at their marine terminal, with spider-web cranes moving about them at great height—no small advertising feature in itself. Pugh Oil is an offshoot of the coal company since 1934, operated from separate headquarters with McGaughey in active charge.

In its newspaper advertising, which is quite consistent and forceful, the company has been featuring a filtered

Harry S. McGaughey

oil, run through Bowser equipment at the bulk plant, and also an additive.

The company operates two bulk-plants, at the north and south sides of town and sales are limited to a five mile radius from either plant. No. 2 oil sells in Racine at 14.3¢ which seems high but the customers are not too badly hurt for the average consumption is just under 1,500 gallons in a climate of 6,900 degree-days. The severe winters have caused the average homeowner to insulate well.

McGaughey is a very alert type . . . an oil man since 1927, starting then with Cities Service. He has made a real contribution to the advancement of fueloil and oilheating as an industry.

Active advertisers, *Pugh Oil has put special emphasis on the fact that their oil is filtered at no extra cost. They also use an additive.*

Pay No More for
PUGH'S
EXTRA FILTERED
Home Heating Oils
Every grade of PUGH's Home Heating Oil is extra filtered before delivery through a BOWSER Filtering Tank containing 30 cellulose cylinders impregnated with a special plastic compound.
In Racine only PUGH has BOWSER filtering equipment for removing the minute, solid particles that are present in all heating oils when they leave the refineries. PUGH'S extra cleanliness means dependable heating and extra value.
Keeps tank clean; no clogging of fuel line or burner—pay nothing extra.
JUST DIAL
2-4491
Each grade of PUGH'S HOME HEATING OIL is extra filtered at our plant through one of these Bowser Filtering Tanks before delivery to your home.
For Winter Comfort in your Home
W.H. Pugh OIL COMPANY
PROMPT DELIVERY IN METERED TRUCK
Reprint of an Advertisement which appeared in the Racine Journal Times

Exposition and Convention slated for Seattle, Wash.

THE SECOND Pacific Coast Oil Heat Exposition, in conjunction with the ninth annual Pacific Coast Convention of OHI chapters, is to be sponsored by the Oil Heat Institute of Washington, Seattle, Wash. The Exposition will be held March 20 to 23 at the Civic Auditorium in Seattle, opening at 6:00 P.M. the evening of March 20. On March 21 it will be opened from 1:00 to 10:00 P.M.; from 1:00 to 6:00 P.M. on March 22, closing early to permit attendance at the Institute's annual banquet, which will take place at the Olympic Hotel. An extra exposition session is scheduled from 1:00 to 6:00 P.M. on Sunday, March 23 to allow dealers more time to visit the exhibits.

Convention sessions are scheduled for March 22, reserved for industry members only, with a slate of speakers arranged for to cover topics of general dealer interest. Major talks will be delivered by T. A. Crawford, Timken Silent Automatic Division and president, Oil-Heat Institute of America; B. T. Weichers, Webster Electric Co.; Arnold Michelson, Minneapolis-Honeywell Regulator Co. and C. T. Brown, Richfield Oil Corp.

More than 140 exhibit spaces have been laid out on the Exposition floor for displays of oilburning equipment and accessories, and even before the initial announcement was mailed by the Washington Institute, Robert G. Elmslie, managing director, had received more than 50 reservation requests from manufacturers. The show will be open to dealers and the public.

Announcements and publicity on both the exposition and convention are being sent by the Institute to all fuel-oil, oilburner and service firms in Montana, Idaho, northwestern Utah, Washington, Oregon, northern California, including the Bay Area, and British Columbia, Canada.

Two years ago the exposition was added to the convention to give dealers from this area an opportunity to witness equipment displays, the time and expense involved usually preventing them from attending the National Oil Heat Exposition held in the East or Midwest.

Final Ideas from the Contest

More Entries with practical Merit, even though they missed winning Prizes

DESCRIPTIVE TEXT and some illustrations are used in the presentation here of more entries submitted for the Useful Ideas Contest, which the judges did not consider prize-winning caliber, but which, nevertheless, contain practical merit and demonstrate originality of thinking that warrants recognition.

So, as explained in the rules of the Contest, a final batch of worthwhile suggestions have been selected for publication. The person identified as sending them in will receive payment for his effort at the rate of 3¢ per word, with a minimum of $5.00 sent to each. The entrant is paid for every word that appears in italics.

In common with some Ideas sent in for last year's contest, this time a number were received that gave details of procedures that either were not new or were not 100% practical. These, of course, receive no prizes, even though there is no doubt they were sent along in complete sincerity.

"A Piece of String"

In one of the short stories that brought him his fame, termed "A Piece of String," Guy de Maupassant had the string drive his principle character to madness and death. Here's a contest entry that could be entitled, "A Piece of String," but its big point is to save service men from overwork, madness, and death. The entry comes from Chester Shapiro, Box 10, Monticello, N. Y. Judge for yourself whether or not you want to apply it to your jobs.

Chester Shapiro says:

"In many cases where an oilburner is located in an out-of-the-way locality, necessitating a long trip for a serviceman, this novel idea that involves only five minutes of work can save long trips. It applies especially to oil outfits that supply free service.

"As is common for long-distance calls and small tanks, the oil supply runs out and the burner needs air-ridding before it can work again. The driver drops the oil, all right, but then comes the service call. Servicemen who have tried to explain to a consumer how to prime the burner have discovered it is useless. The average consumer forgets quickly.

"Now the owner can remember this way. If the fuel unit hasn't an air-ridding cock that you open with an Allen wrench, equip it with such a cock. Insert a 6" Allen wrench and leave it in the cock."

Here's where the string comes in.

"Tie one end of a long piece of string to the 6" Allen wrench, and tie the other end to the burner panel on the smokepipe.

"Now when the burner needs priming, the home owner goes downstairs, goes to the beginning of the string and presses the re-set button on the relay, then follows along the string to the Allen wrench, turns this, and waits until the oil comes through. Once this is explained to him, the consumer never forgets it."

We can't explain why, but this reminds us of the time we tried to tell the maid in a pretentious home how to re-set the safety device of an old Model G Oil-O-Matic, over the telephone that is, and she swore that by following our instructions to the letter she wound up sticking her finger into a live fuse socket that for some unexplained reason happened to be empty.

Familiar Entries

The 1951 Useful Ideas Contest resembled the 1950 contest in that it brought in dozens of entries that followed similar patterns. Many service men think it's a good, original idea to facilitate air-ridding fuel units by fitting them with venting cocks, but disregard the fact that Webster's been doing this for years. Entries from Haddon Heights, N. J. and Spencer, Mass. explained and extolled this easy-air-rid idea, for example.

Several contestants are violently opposed to soot escaping from swinging-disc type and similar draft regulators; based their hopes for winning prizes on ideas for preventing such escape of soot. Making it easy for owners of steam boilers to see the level of water in a gage glass was on the minds of many contestants. One of these men says he uses three boxes of Tintex to color the water in a steam boiler, thus making it easy to see the water in the gage glass. Another unsuccessful idea from the same service expert suggests equipping an oilburner with big air filters, to keep the burner blower clean on a bakery job or other job where dirt-clogging of the blower is a headache. He may have an idea there, but the idea was not considered generally useful, hence just missed obtaining an also-ran award.

Electrical Testing

There's payment, however, for this idea from service expert Herbert P. Hinckley, 21 Columbia Ave., Hartsdale, N. Y. Here it is:

"One of the best tools I bought last year is a radio-type meter for volts, ohms, and milli-amperes.

"I have found that in 220-volt three-phase work on industrial burners there are actually two common voltages. One 230 volts and one may run to 245 volts. One 208 volts may drop to as low as 187 volts at the burner when it is starting. A voltmeter is needed to bring out these things. Low voltage causes a transformer to give a weak spark, and causes a solenoid oil valve to fail to open as it should when the oil pressure is the maximum for which the valve is rated. On the other hand, high voltage burns out coils; knowing about high voltage gives you the explanation for chronic burn-out trouble.

"Check the ohms to test parts suspected of being water soaked or burned out. You test the parts without removing them and with no danger of getting electrocuted. I just connect up the ten megohm scale that uses a 45-volt battery, throw off all the switches, and wade around in the water doing my testing without a worry about getting

a bad shock. Any equipment that does not show a complete short to ground probably will run without blowing fuses. Three-phase motors show the same ohms resistance on each phase if not shorted within the windings. For instance, a three-quarter horsepower 220-volt three-phase motor checked five ohms on each winding and proved okay."

Obviously there's much more to all this than Herbert Hinckley goes into in his entry, which is given in full above, but then he's trying to point out some of the ways in which his new meter proved most useful to him; he's not trying to write a textbook or complete instructions.

Here's a batch of five interesting ideas from Francis Martin, who works for the Wm. R. Hogg Co., Inc., Asbury Park, N. J., and who won a nice cash prize, as was reported in the October issue of FUELOIL & OIL HEAT. He gets extra money now, of course, for the following words.

"My Diag. A shows an idea I have tried out to keep a low-capacity nozzle cool, thus help keep it clean. This idea involves a little bother and expense, but on some jobs proves worth it.

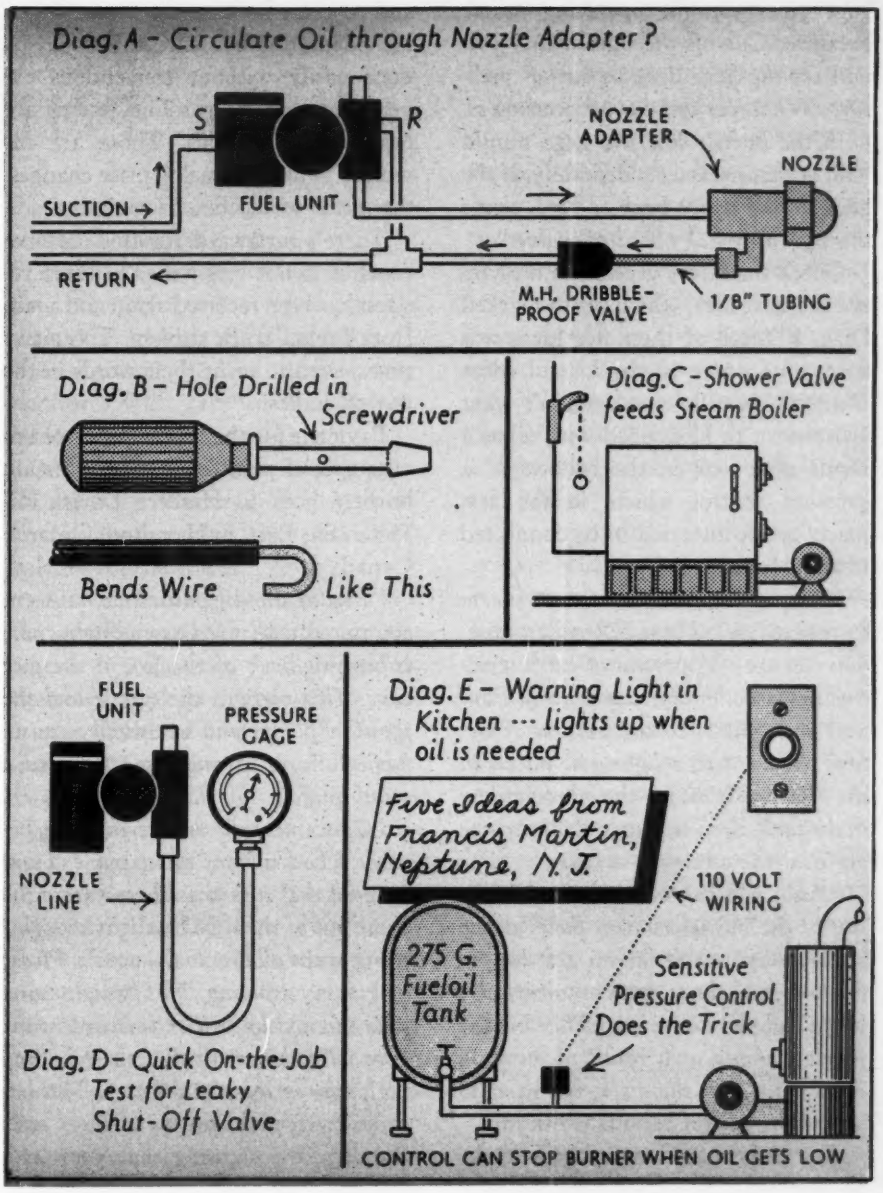
"Drill a 1/8" hole in the nozzle body or nozzle adapter, tap and solder in place a 1/8" elbow, and from this run a 1/8" copper tube line to a Minneapolis-Honeywell Dribble-Proof Valve. Connect the other side of this valve to a tee in the burner's return line, all as my drawing shows.

"This arrangement gives oil circulation through the nozzle adapter, keeps the nozzle cool."

That's what the man says and it's the germ of an idea. However, experts will wonder about using the M.H. valve as a pressure regulator (non-adjustable, doesn't it open at 80 psi and close at 70 psi?) compared to the results of using valves designed to regulate pressure, and about the effect on this arrangement's oil circulation when the fuel unit is adjusted for unusually low nozzle pressure.

(How about that soldered joint at the nozzle adapter? That's not safe!)

"Diag. B shows how to get another use out of your screwdriver. In the round part, drill a hole just large enough to take #14 wire. To put a hook on a wire to fit the terminal screw of a relay or control, put the end of the wire in the hole in the screwdriver and turn the screwdriver handle."


Diag. A - Circulate Oil through Nozzle Adapter?
S
R
NOZZLE ADAPTER
NOZZLE
SUCTION
FUEL UNIT
RETURN
M.H. DRIBBLE-PROOF VALVE
1/8" TUBING
Diag. B - Hole Drilled in Screwdriver
Bends Wire Like This
Diag. C - Shower Valve feeds Steam Boiler
FUEL UNIT
PRESSURE GAGE
NOZZLE LINE
Diag. D - Quick On-the-Job Test for Leaky Shut-Off Valve
Diag. E - Warning Light in Kitchen --- lights up when oil is needed
Five Ideas from Francis Martin, Neptune, N. J.
110 VOLT WIRING
275 G. Fueloil Tank
Sensitive Pressure Control Does the Trick
CONTROL CAN STOP BURNER WHEN OIL GETS LOW

Obviously you've got to use a screwdriver that's got a rounded part of the right size, for the hook you make should fit the terminal screw; and drilling a hole in too slim a screwdriver will weaken it.

Has the contestant got something new under the sun in his next one? See his Diag. C.

"Use a lever-and-chain-type shower valve in place of a globe valve, to feed water to a steam boiler. The idea is valuable where the owner hasn't the strength to turn off a globe valve, or is forgetful and sometimes walks off leaving the boiler feed valve open. You've got to keep the chain pulled down to keep water feeding into the boiler, and when you let go the valve snaps shut."

While we are intrigued by this pull-the-chain boiler feeding, we must point out that most oil heat enthusiasts find no substitute for automatic feeders and low-water cut-out combinations.

"Many service men replace fuel unit shut-off valves that are okay, or leave leaky shut-off valves untouched," Francis Martin points out. *"They replace a shut-off valve because there's afterburning at the end of the gun tube, for example, and find out later this was caused by oil striking the air-handling parts because the nozzle is dirty or defective, or is not centered properly.*

"Use the method shown in Diag. D to find out if the shut-off valve leaks or is okay. Connect a pressure gage to the nozzle line of the fuel unit. Run the burner a couple of minutes, and the

gage gives you the operating nozzle pressure. Cut off the burner and you will see the gage drop to cut-off pressure. Whatever this cut-off pressure is, with the burner idle the gage should hold at that pressure indefinitely. If the gage needle drops back to zero, that's the sign of a leaky shut-off valve."

Check the safety aspects before you use the next idea, which we've marked Diag. E (each of these five ideas was a separate entry in the Useful Ideas Contest), because you wouldn't want a basement to be flooded with oil as a result of a leak in the bellows of a pressure control which, in the first place, is not intended to be connected to an oil line.

"Where a customer wants an alarm to report low oil in a 275-gallon tank, you can use a Vaporstat or extra-sensitive steam-boiler pressure control. Connect the control to the bottom of the tank. Wire it to a light you install in the kitchen. Wait for the oil to get low in the tank, then set the control to come on. Seal the adjusting screws.

"Also, you can connect the Vaporstat to the burner control panel so the burner stops when the oil gets low in the tank, and starts again automatically when oil is delivered. The burner won't air-bind as a result of running out of oil, and there's never need to air-rid the burner because it runs dry."

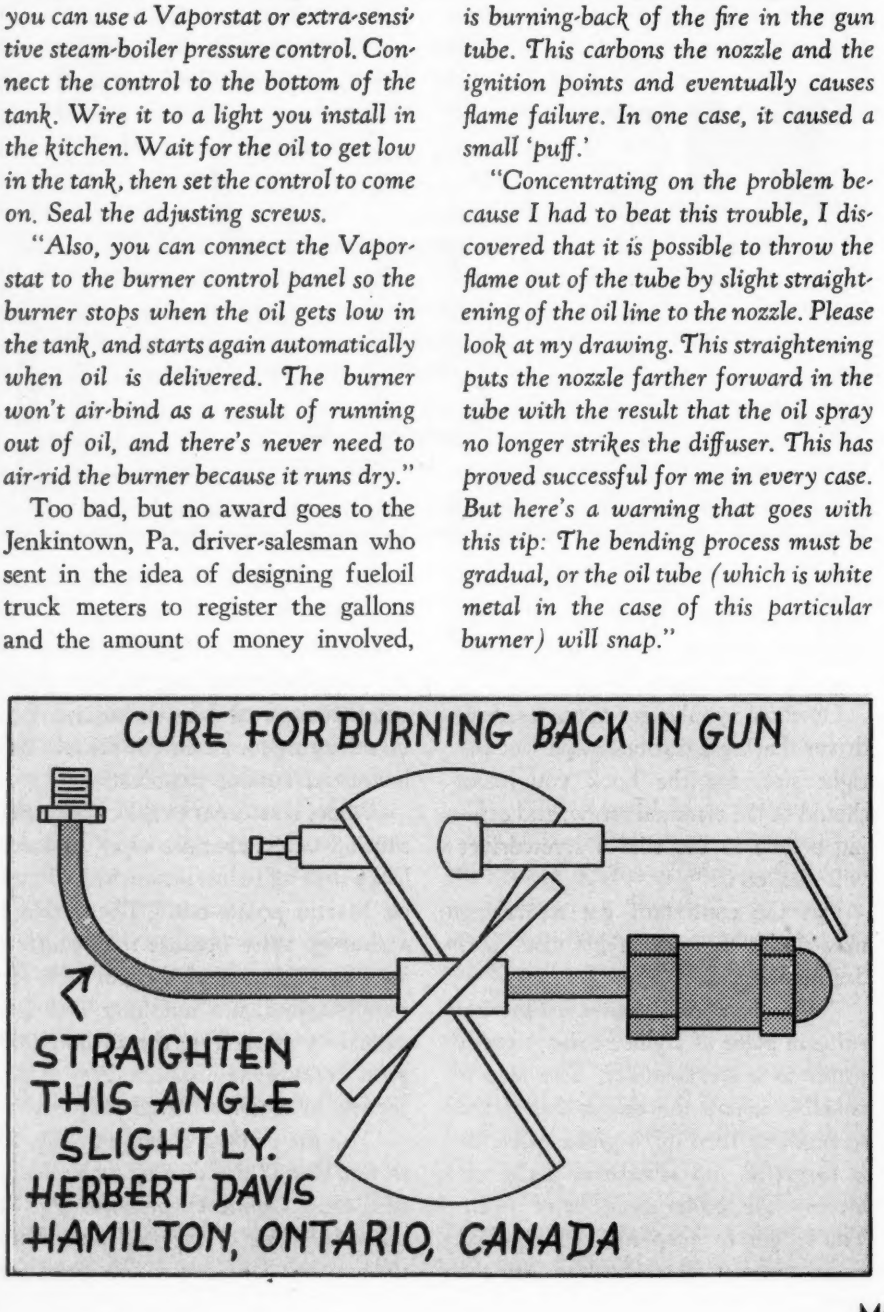
Too bad, but no award goes to the Jenkintown, Pa. driver-salesman who sent in the idea of designing fueloil truck meters to register the gallons and the amount of money involved, and to print both on the meter ticket. He points out he's sure this could be done easily without tremendous expense because all gasoline pumps are designed to do this. Those are his words. When the fueloil price changes, the meter would be changed also.

There's no award for this idea because it is not original. The same request has been received again and again from fueloil truck drivers. Too many times, even to print their words in the pay-off italics!

Payment for the following emphasis on a special point of servicing certain burners goes to Herbert Davis, 153 Picton St., East, in Hamilton, Ontario, Canada.

"One of the difficulties we have encountered with fixed-assembly burners is burning-back of the fire in the gun tube. This carbons the nozzle and the ignition points and eventually causes flame failure. In one case, it caused a small 'puff.'

"Concentrating on the problem because I had to beat this trouble, I discovered that it is possible to throw the flame out of the tube by slight straightening of the oil line to the nozzle. Please look at my drawing. This straightening puts the nozzle farther forward in the tube with the result that the oil spray no longer strikes the diffuser. This has proved successful for me in every case. But here's a warning that goes with this tip: The bending process must be gradual, or the oil tube (which is white metal in the case of this particular burner) will snap."



This contestant, also, has started us wondering. Is it literally true that white metal is used for the nozzle line of this burner, or does the appearance and softness of the line just give the service man the idea that it might be white metal?

Right up the same alley of precision electrical check-ups is this award-winning entry from Kenneth B. Wheeler, 128 Young St., Manchester, N. H.:

"When you strike one of those burners that threatens to drive you crazy by going off on safety once a week or once a month, and you have checked the pump with pressure and vacuum gages, and checked the electrodes and nozzle and the starting switch in the motor, then try checking the safety switch with your Tattelite.

"Clip the Tattelite to the two wires that lead to the heater part of the safety device. Watch the Tattelite when the burner starts, and you can tell exactly when the hot contacts close. Those are the contacts that must close when the smokepipe gets warm.

"One job I tested took about a dozen starts before the light stayed on and showed a loose connection."

Dirt-streaked Walls

E. Winchester, of Hamilton, Ontario, Canada, gets a check for pointing out why walls sometimes get dirt-streaked and how he cures the trouble. This entry of his will interest the many service men who specialize in furnace-duct heating:

"Several calls I have gone out on are the result of suspicion that the furnace is leaking, because black marks appear above supply registers. The installers did not leave enough box to fold back over the register, but cut the metal flush with the wall. A high velocity air stream escapes where the register does not fit tightly to the wall.

"I cure this by cutting strips of asbestos paper and fitting them between the register and the wall. I wet the paper and make it conform to the irregular surface of the wall, and I tighten the screws supposed to make the register fit tight against the wall. After my asbestos gaskets, made in this way, have dried, then I coat all around the register with clear shellac

(Please turn to page 156)

Perimeter heating Tests reported at ASHVE Meeting

COLD FLOOR AREAS were practically eliminated and room-air temperature differentials were small in a single story, low-cost, basementless home with a concrete slab floor that was test-heated with a warm-air, radial-feeder, perimeter-loop system, it was reported at the 58th annual meeting of The American Society of Heating and Ventilating Engineers in St. Louis, January 30. It was further stated that no difficulty was experienced in the thermostatic control of room-air temperature during periods of rapidly changing weather conditions.

The report was contained in a paper by M. E. Childs, research associate in mechanical engineering; R. W. Roose, research assistant professor of mechanical engineering, and S. Konzo, professor of mechanical engineering, University of Illinois, Urbana, Ill.

Concrete slab Problem

Their report described the difficulties often encountered in concrete floor slab construction, particularly in low-cost housing, such as cold floor surfaces and condensation on these surfaces and offered the radial-feeder, perimeter-loop heating sysem as an "approach of distinct promise."

The radial-feeder perimeter system used by the investigators consisted of an 8-inch diameter warm-air duct embedded in the concrete slab in the form of a single loop around the periphery of the floor, and of a series of 8-inch diameter radial-feeder ducts connecting the perimeter duct with a subfloor plenum below the furnace.

Four arrangements of feeder ducts were studied, including two arrangements with three feeders each, a four-feeder arrangement and a five-feeder arrangement. Best results were obtained with the arrangements in which feeder ducts were extended into the corners of the residence.

The over-all objectives of the investigation were to determine:

1—Uniformity of room-air temperatures at the sitting level throughout the house, and the response of the system to thermostatic conrol.

2—Room-air temperature differentials between the floor level and the sitting, breathing and ceiling levels.

3—Pattern of floor surface temperatures with various duct arrangements.

4—General performance characteristics of the burner and blower, including the pressure losses and a heat balance for the system.

A down-flow furnace was used with the system and the warm air was forced directly from the furnace into the subfloor plenum from which point it was delivered through the feeder ducts to the perimeter duct and then into the rooms through floor registers. The air moved across the rooms to a single return-air intake in the living room and then into the furnace to be reheated.

The response of the system to sudden changes in outdoor temperature was considered to be satisfactory since no evidence of lag or overrun of room-air temperatures was experienced during periods of rapidly changing outdoor temperatures. The conventional room thermostat used with the system proved to be satisfactory for controlling the room-air temperature. The practice of balancing the system by means of adjusting the shutter dampers on the floor registers proved to be satisfactory.

Small Temperature Differentials

Room-air temperature differentials were small. For example, at an outdoor temperature of 20° F. the temperature differentials from the floor level to the breathing level ranged from 2.7 to 3.5 degrees for the four duct arrangements. These temperature differentials were equally as good as those experienced with a conventional warm-air system in a well-insulated house with a full basement. Floor surface temperatures were satisfactory for the duct arrangements in which feeder ducts extended into the exposed corners of the floor. In cases where feeder ducts were not extended into the corner areas, the floor surface temperatures were low.

Floor surface temperatures in excess of the commonly accepted maximum value of 85° F. for living areas were experienced. However, these temperatures occurred only in narrow sections of floor directly above the feeder ducts and were not considered critical. In no case did temperatures above the perimeter duct, or in areas along the walls adjacent to the subfloor plenum, exceed the value of 120° F. commonly accepted as the maximum for borders and aisles.

The operating conditions for the system, which were exactly the same as those for the continuous air circulation principle, proved to be satisfactory for the perimeter system. The actual pressure losses for the warm-air and return-air duct systems were in reasonably good agreement with the calculated values. Furthermore, the pressure loss external to the blower-furnace combination was less than the 0.20 inch of water available. This indicated that some reduction in the size of feeder and perimeter ducts could be made without exceeding the limit of 0.20 inches.

Eight percent Margin

In connection with the fuel input rate a comparison of the actual fuel consumption with the theoretical requirements indicated that there was a margin of safety of 8% in determining the theoretical input rate. This difference of 8% between the actual and theoretical requirements indicates that the practice of selecting the fuel input rate on the basis of the total calculated heat loss divided by the assumed bonnet efficiency is reasonable.

On the basis of the results obtained with the four separate arrangements for the radial-feeder perimeter system it was evident that such a system should be designed so that:

1) feeder ducts extend into exposed corners of the floor

2) the total air-flow distances from the subfloor plenum to the registers are relatively short.

3) relatively high air-flow rates are maintained in all sections of the perimeter ducts.

Appreciate the Serviceman

by

William C. Robbins

IN VIEW of all the recent articles regarding the lack of manpower in our industry, I would like to offer the following, which I think should bear publication. I do not think what I have to say is detrimental to the fueloil or oilburner industries, but rather it is a critical analysis of one of our major headaches.

This involves not only the lack of new manpower, but the exodus of the "old hands" into more lucrative industries. I blame most of this on the cutthroat competition for which the industry itself is responsible. As an "old hand" myself, it continually amazes me to see what some of our constituents give away and still show a profit—or do they? If this is necessary, why take it out of the service department? It is sales expense and should be shown on the ledger as such.

I firmly believe that in these days of VENTALARMS and automatic deliveries that the serviceman is the best contact this industry has with its customers. Who spends more time on the customer's premises? Who answers more questions? Gives more advice? Who, when they need more hot water or do not have any heat, is more welcomed by the customer, regardless of the hour or weather? Who makes fuel saving recommendations, with or without the use of instruments? Tell me, who is the real ambassador of oilheating, without portfolio, or prestige?

I'll tell you. It's the back door, down-the-cellar, dirty hands serviceman!

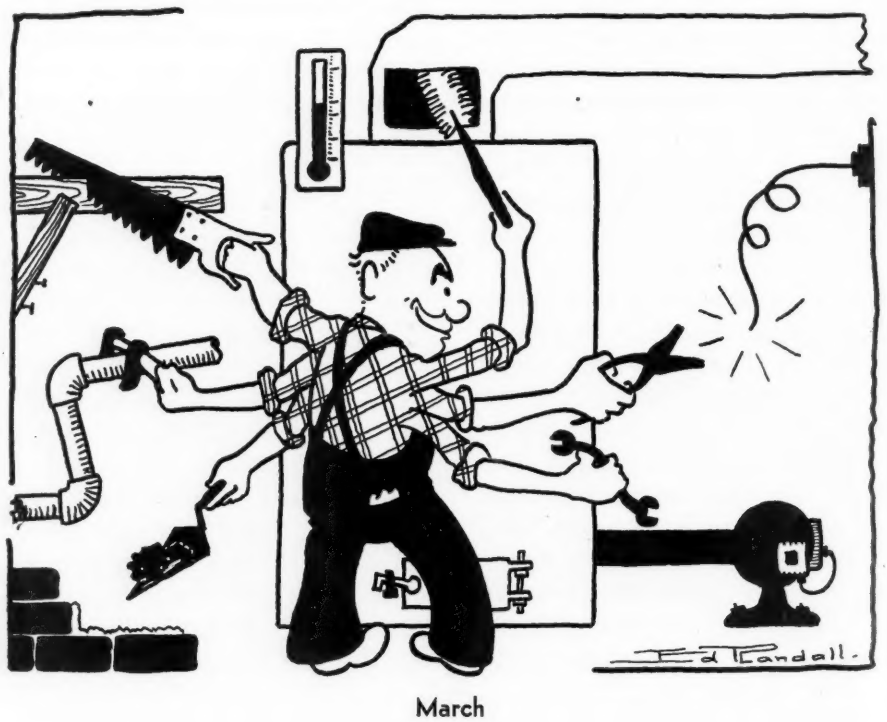
I realize that it's the salesman who is responsible for bringing in a large percentage of the new business (some does come from service recommendations) but after the contract is signed who carries the responsibility? Who retains the customer? The serviceman.

What is the main difference the gas utilities can claim over us? Certainly not fuel cost or sales cost. No, it's not that. It's service and depreciation expenses. And, in view of all this, I feel it is high time the oilburner serviceman was elevated to his rightful place in this business and paid accordingly.

Suppose you read the following advertisement:

"Wanted: A personable young man to answer all the following requirements:

1. *Diplomat (always)*
2. *Salesman (always)*
3. *Heating engineer (all types of systems)*
4. *Combustion engineer*
5. *Air Conditioning engineer (gravity and forced air systems)*
6. *Plumber (all types of hot water hookups)*
7. *Gasfitter (gas valves, etc.)*
8. *Carpenter (building forms, removing stairs, etc.)*
9. *Bricklayer (chimneys, foundations)*



10. *Mason (combustion chambers)*
11. *Automatic control expert (all types)*
12. *Electricians (all types of wiring)*
13. *Insulation expert (internal and external)*
14. *Sheet metal mechanic*
15. *Expert on high pressure burners (all makes)*
16. *Expert on low pressure burners (all makes)*
17. *Expert on vertical rotary and wall flame burners (all makes)*
18. *Expert on vaporizing burners (all makes)*
19. *Expert on heavy oilburners (all makes and types)*
20. *Millwright (installing tanks and boilers)*
21. *Ironworker*
22. *Machinist*
23. *Electric motors (knowledge of all types)*
24. *Rigger*
25. *Boiler, chimney and furnace cleaner*
26. *Truck driver*
27. *Laborer*

Average pay $1.50 per hour; subject to call 24 hours a day; not paid unless called.

Please reply giving full details and resume of past experience."

That's not so fantastic as it sounds, because an A-1 oilburner serviceman can and does perform all twenty-seven of those jobs as a regular part of his work.

I think this tells why this industry is not encumbered with new blood, especially in this age of high wages and prosperity. All our schools are to no avail unless we relegate the oilburner service department to its rightful place. It's our first line of defense!

Madison Fuel introduces first fuel vending Machine

ALONG WITH CIGARETTES, coffee, and soda pop, you can get your coal and fueloil by dropping a coin in the slot. That's what E. J. Frautschi, president, Madison Fuel Co., Madison, Wisc., announces—the world's first combined coal and fueloil vending machine!

In operation 24 hours a day at the main entrance to Madison's plant, it dispenses Delta stoker coal (50¢); briquets (75¢) and Shell fueloil ($2.00 for 5 gal. can including $1.00 deposit). It takes any combination of nickels, dimes and quarters.

Intended originally as a way of eliminating night calls, R. E. Otto, sales manager, firmly believes that the vending machine will show a profit in its own right. Mr. Otto also reports that the popularity of the machine has brought new customers for Madison's regular delivery service.

Operating for several months, the vending machine has had good public acceptance especially on week-ends and holidays. Part of this success can be attributed to the advertising campaign used to "back up" the machine. All three Madison radio stations carry "spot" announcements and ads are run regularly in two newspapers.

Relatively inexpensive to construct, the machine was designed by F. B. Dickinson Co., Des Moines, Iowa.

Madison Fuel Co. was started by Mr. Frautschi 42 years ago in 1910.

A coin-operated *coal and fueloil vending machine in operation 24 hours a day at the main entrance to Madison Fuel Co., is proving a good success especially on week-ends and holidays. Not only will the machine show a profit, R. E. Otto, sales manager, believes, but it eliminates making many night calls and has resulted in obtaining new customers for regular delivery service.*

❖

Joseph A. Grazier, formerly vice-president and secretary, American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa., was elected executive vice-president, named to the board of directors and its executive committee, succeeding in all three positions the late J. Phillips Cosgrove who died last December. Named as secretary was *Frank J. Berberich.* Grazier was elected assistant secretary in 1939, two years after he joined the company. In 1947 he was elected secretary and in 1951 was made vice-president and secretary. Berberich joined American-Standard in 1947 as assistant secretary. Previously, he had served for 10 years with Sullivan and Cromwell.

Program being arranged for largest oil heat Show

THE 29TH ANNIVERSARY Oil-Heat Exposition, being held April 14 to 18 at Commercial Museum in Philadelphia, will be the largest on record with 135 manufacturers scheduled to display their products. Exhibit space, which occupies more than 100,000 sq. ft. of floor space, is almost completely sold out. Thirty-four companies have taken space in the section of the exhibit hall reserved for "live" exhibits.

The dominant exhibit will be a huge Theme Center, featuring a 24 ft. tower and occupying nearly 500 sq. ft. In four sections of the Center will be booths of the Oil-Heat Institute, its Distribution Division, Philadelphia Chapter of OHI and the Oil Industry Information Committee.

Particular emphasis this year will be placed upon displays of commercial-industrial equipment, in addition to the presentation of domestic burners and accessories. Heavy-duty burners, boilers, packaged steam generators, refractories and controls, both electronic and conventional will furnish centers of attraction for burner and oil dealers, engineers, architects, contractors, government officials and purchasing agents.

The Exposition opens at Commercial Museum at 1:00 P.M. on April 14 and remains open until 10:00 P.M. on that day and the three following. Exhibit hours on April 17 and 18 are from 1:00 to 6:00 P.M. Ralph Becker, Institute managing direector, is supervising preparations.

OHI's Annual Convention is being held at the same time, with the Benjamin Franklin Hotel established as headquarters. L. A. Casler, executive vice-president, Eureka-Williams Corp., is chairman of the Show Committee and is preparing a program that will concentrate on down-to-earth practical industry sessions. Three main programs are to cover significant subjects during "Dealer," "Industry," and "Engineering" sessions.

The Dealer Day meeting, April 17, according to Mr. Casler, will be of the panel-type forum, with four speakers addressing the group, introduced by a moderator. After the speeches, the moderator will preside over a panel composed of the speakers themselves who will answer questions from the floor. Supply, service and sales will be the keynote of the session.

Industry Day on April 16 is being planned to include subjects of interest to all segments of the industry. Availability of fueloil supply and oil-burning equipment, information on current government programs as they affect our industry, marketing and selling topics will occupy important places on the agenda.

On April 15 during the Engineering Day session dealers, manufacturers, installers, servicemen and engineers will have an opportunity to hear the latest technical information on a variety of subjects.

The Commercial-Industrial Committee of the Institute also is sponsoring a session to be held during the afternoon of April 16, following a luncheon that is being arranged by the Committee. Another luncheon will be held on the same day, this one being arranged by the Accessory Division. It is rumored that a prominent Senator has practically assured the committee making arrangements that he will deliver the principal address.

The revived Technical Division is taking part in the program, too, with a meeting set for Tuesday, April 15, to be followed by a luncheon.

Social activities are not being neglected by any means, despite the concentration on serious subjects that is being programmed. On Tuesday evening members of the Old Timers' Club of the Oilburner Industry are to gather at Lulu Temple for their annual Jamboree. Stanley Czarnecki, Fred Haab and Curt Soderberg are making the arrangements for a typical wild and wooly dinner "meeting."

The ladies will have their day, too. Jack Campbell of Elliott-Lewis Co., is chairman of a committee that is making plans for their entertainment, which is expected to include trips to nearby points of interest, card parties, fashion shows and other activities.

On Wednesday evening, April 16, the Oil Heat Old Timers, Inc. have arranged for a dinner-entertainment for OHOT members. It will be held at the Locust Cafe, 45th & Locust Sts., getting underway at 7:00 P.M. The entertainment committee consists of Dan Bierman, Joe Ross, Herb Hellman and Walter Bernard.

and 29th Annual Convention
sponsored by
Oil-Heat Institute of America

Then on Thursday evening, April 17, the Institute will hold its annual banquet and entertainment. Al Atwill, Quaker Mfg. Co. and past president of OHI, is to be toastmaster for the traditional brief remarks and introduction of head table guests.

An innovation being tried this year will place a premium for prompt attendance at the Engineering, Dealer and Industry sessions by presenting each person who arrives before the meeting starts with a stub that entitles him to participate in drawings for prizes worth $1,000. Television sets, golf bags, fishing tackle and appliances will be included, along with other gifts of substantial individual worth. The prizes will be displayed in the Exposition Hall and drawings will take place at the Annual Banquet. The winners do not have to attend the Banquet and arrangements will be made for pick-up by or delivery to the winners.

Hotel reservations should be made through the Philadelphia Convention and Visitors' Bureau, 17th at Sansom St., Philadelphia 3, Pa. More than 1100 rooms have been reserved for Exposition and Convention visitors at the Benjamin Franklin—Convention headquarters—the Adelphia, the Warwick and the Barclay. Bus and taxi service will be available to the Exposition Hall.

OHI Technical Division is activated at Meeting

A MEETING of the Technical Division, Oil-Heat Institute of America, New York 16, N. Y., was held at the Hotel Commodore, New York on February 15 when 20 technical men from the oil and oilburner industries gathered to further outline the work of the division.

In putting it on an active basis, William Quimby of the Texas Co. was elected chairman and Ed Haugen, Timken Silent Automatic Division, was made vice-chairman. William Sullivan, Shell Oil Co., was appointed chairman of the membership committee and Robert Gray, FUELOIL & OIL HEAT, chairman of the program committee. Other members of the program committee are R. F. Hertel, General Electric Co., and R. P. Gilmartin, Gulf Oil Co., Pittsburgh, Pa.

It was decided the Technical Division will invite all interested parties to a meeting during Convention Week at Philadelphia, to be held at the Benjamin Franklin Hotel at 10:00 A.M., Tuesday, April 15. The meeting is to be followed by a luncheon for this particular group.

At that meeting the program committee is going to outline various projects for consideration. The primary function of the division is to be one of liaison between the oil and burner industries on common problems, mostly technical. The membership is not confined to OHI members, but rather the Institute is sponsoring the activity for all industry men with interests along this line.

We are Moving

On April 1 FUELOIL & OIL HEAT will be located in new offices on the 11th floor at 2 West 45th St., New York 19, N. Y. Telephone numbers will be changed to MUrray Hill 2-4786, 2-4787 and 2-4788.

Increased business, expansion of facilities and additional help call for larger office space. We won't be so crowded after April 1 and we'll be better able to carry on our service to the oilheating industry.

Oil equipment Jobbers form national Group

RECOGNIZING THAT THE NATION'S 350 oil marketing equipment jobbers have many problems in common, a group of these jobbers got together in Louisville, Ky., last May and organized a trade association, the National Association of Oil Equipment Jobbers. Although less than a year old, NAOEJ has 101 members with new applications being received each week.

Of its total membership, 54 are "active"—that is firms or individuals who are in the business of marketing oil equipment as a jobber. They must maintain an office and warehouse and have a representative stock of oil marketing equipment.

The remainder are classified as "associate" members. This covers persons or firms who are connected with the oil marketing equipment industry, or an allied industry, but who do not qualify for active membership. This category includes equipment manufacturers, manufacturers' representatives, and all other oil equipment men and firms who do not meet the definition of an active member.

President and founder of the new organization is J. M. Newberry, Newberry Equipment Co., Memphis, Tenn. Mr. Newberry, a long-time equipment jobber, took steps to get the organization started because he felt that all oil marketing equipment men could benefit by having a national medium through which they could exchange ideas.

150 equipment men attended NAOEJ's first annual meeting in St. Louis, Mo., last fall. More than twice that many are expected to be on hand for the second annual meeting, scheduled for October 6 through 8, 1952, at Columbus, O.

The jobbers aim, through the organization, is to gain recognition for themselves as the logical link between the manufacturer and the user of oil marketing equipment. They point to the fact that they maintain an inventory of everything from pumps to small fittings, and that they've got the needed item when it is needed most. They also point to their service departments and the fact that they not only sell oil equipment, but are prepared to service it as well.

In addition to Newberry, other officers of the association are Fred Coffield, South Bend, Ind., vice-president; H. R. Tuller, Columbus, O., secretary and E. de Penaloze, St. Louis, Mo., treasurer.

National headquarters for NAOEJ is located at 1402 Hunt Bldg., Tulsa, Okla. Executive secretary is Howard Upton.

A list of active and associate members are as follows:

ACTIVE MEMBERS

The Amco Corporation
Chicago 7, Illinois
Beasley Equipment Co.
Monroe, Louisiana
Allan U. Bevier, Inc.
Baltimore 30, Maryland
Braswell Equipment Co.
Wilson, North Carolina
C. A. Brewer
Rochester, New York
Carolina Oil Equipment Co.
Raleigh, North Carolina
Coffield Supply Company, Inc.
South Bend 10, Indiana
Collson-Murray Company
Greensboro, North Carolina
Cruzen Oil Equipment Co.
Memphis 3, Tennessee
Equipment Sales Company, Inc.
Atlanta, Georgia
Equipment Sales & Service
Nashville 3, Tennessee
Friel-Detroit Company
Detroit 4, Michigan
Gasoline Equipment Manufacturing Company, Inc.
Indianapolis 7, Indiana
General Equipment Co.
St. Louis 10, Missouri
General Oil Equipment & Service
Cincinnati 4, Ohio
Georgia Oil Equipment Company, Inc.
Atlanta, Georgia
Gould Equipment Co.
Portland, Maine
Indiana Oil Equipment Co.
Indianapolis 4, Indiana
Kelleher Equipment Co.
Tulsa 4, Oklahoma
Koehler & Rittiner Engineering Co.
New Orleans, Louisiana
W. E. Layman Company
Akron 4, Ohio
H. O. Link & Son
Baltimore 23, Maryland
C. L. McBride Company, Inc.
Louisville, Kentucky
Modern Oil Equipment Corp.
Richmond 22, Virginia

Monroe Equipment Co.
Miami 47, Florida
Mosbeck Oil Equipment, Inc.
Chicago, Illinois
Newberry Equipment Co.
Memphis, Tennessee
Northwest Service Station Equipment Co.
Minneapolis 2, Minnesota
Ben F. Offutt & Co.
Louisville 6, Kentucky
Ohio Oil Equipment Co.
Columbus 15, Ohio
Oil Appliances Co.
Indianapolis 2, Indiana
Oil Equipment Service & Sales Co.
St. Paul 3, Minnesota
Pennington Equipment Sales Co., Inc.
Williamsport, Pennsylvania
Petroleum Equipment Co.
Nashville, Tennessee
Petroleum Equipment Company, Inc.
Columbia, South Carolina
Petroleum Equipment Service
And Maintenance Co.
Allentown, Pennsylvania
Pump & Tank Company, Inc.
Richmond, Virginia
Rebmann Company
Philadelphia 4, Pennsylvania
Rutledge Equipment Co.
Pittsburgh 22, Pennsylvania
Savannah Equipment Co.
Savannah, Georgia
R. V. Seaman Company
Saginaw, Michigan
Service Equipment Co.
New Orleans, Louisiana
Service Specialties Inc.
Jersey City 2, New Jersey
Southern Supply & Equipment
Company, Inc.
Atlanta, Georgia
Strappers Equipment Co.
New York 61, New York
Robert Taylor & Sons
Salt Lake City, Utah
Tri-State Equipment Co.
Kansas City 8, Missouri
Tuller Equipment Co.
Columbus 8, Ohio
United Pump Service & Supply Co.
Dallas 2, Texas
Van Praag Equipment &
Manufacturing Company, Inc.
Decatur, Illinois
West Penn Oil Equipment Co.
Pittsburgh 12, Pennsylvania
R. H. Wishman Co.
Buffalo 22, New York
Young Equipment Co.
Toledo 2, Ohio
Zeller Company, Inc.
Wichita, Kansas

ASSOCIATE MEMBERS

Allan Anthony Electric Corp.
Forest Park, Illinois
B & K Tank Gauge Corp.
Paterson 3, New Jersey
Balcrank Inc.
Cincinnati 9, Ohio
Blackmer Pump Co.
Grand Rapids 9, Michigan
Buckeye Iron & Brass Works
Dayton, Ohio
Byroad Manufacturing Corp.
Indianapolis 2, Indiana
Clay & Bailey Manufacturing Co.
Kansas City 3, Missouri
Commercial Filters Corp.
Boston 27, Massachusetts
Electric Hose & Rubber Co.
Wilmington, Delaware
Erie Meter Systems, Inc.
Erie, Pennsylvania
Ever-Tite Coupling Co., Inc.
New York 19, New York
Emil Georg & Company
Atlanta, Georgia
The Gates Rubber Co.
Sales Division, Inc.
Denver 17, Colorado
The B. F. Goodrich Co.
Akron, Ohio
Granberg Corporation
Oakland 8, California
Clifford B. Hannay & Son, Inc.
Westerlo, New York
The Huffman Manufacturing Co.
Dayton, Ohio
Joyce-Cridland Company
Dayton 3, Ohio
William A. Knapp Co.
Kansas City 6, Missouri
Lincoln Engineering Co.
St. Louis 20, Missouri
A. Y. McDonald Manufacturing Co.
Dubuque, Iowa
Marlow Pumps
Ridgewood, New Jersey
Master Manufacturing Co.
Litchfield, Illinois
Metal Hose & Tubing Co.
Dover, New Jersey
Milwaukee Valve Co.
Milwaukee 7, Wisconsin
Neptune Meter Co.
New York 20, New York
OPW Corporation
Cincinnati 25, Ohio
Power Reels, Inc.
Buffalo 22, New York
George D. Roper Corp.
Rockford, Illinois
Rotary Lift Co.
Memphis, Tennessee
Scully Signal Co.
Cambridge 41, Massachusetts
A. O. Smith Corporation
(Meter Division)
Los Angeles 22, California
Standard Magnesium Corp.
Tulsa, Oklahoma
Standard Steel Works
North Kansas City 16, Missouri
Stonco Electric Products Co.
Elizabeth 4, New Jersey
Stow Manufacturing Co.
Binghamton, New York
Tokheim Oil Tank & Pump Co.
Fort Wayne 1, Indiana
Tru-Flate, Inc.
Oakland, California
Universal Valve Co.
Elizabeth, New Jersey
Viking Pump Co.
Cedar Falls, Iowa
H. S. Watson Co.
Emeryville 8, California
The Wayne Pump Co.
Fort Wayne 4, Indiana
Weil Sales & Service
Chicago 40, Illinois
Wheaton Brass Works
Union, New Jersey
Whiteway Manufacturing Co.
Cincinnati 23, Ohio
William M. Wilson's Sons, Inc.
Lansdale, Pennsylvania
John Wood Co., (Bennett Pump Div.)
Muskegon, Michigan

Bureau of Mines tabulates fueloil Sales since 1926

DETAILED SALES FIGURES for fueloil and kerosene in a quarter-century of fueloil sales have been compiled into a 100-page booklet by the Bureau of Mines, U. S. Dept. of Interior, under the direction of A. T. Coumbe and I. F. Avery, commodity-industrial analysts, Petroleum & Natural-Gas Branch, Fuels & Explosives Division. Inasmuch as many of the earlier fueloil reports were no longer available for distribution and since long-term data for the fueloil market is frequently requested, it was decided to gather all this material together.

The total sales of distillate fueloil for heating (Table #1) shows a steady upward trend since 1934, except for the war years, 1943-1945. Of particular interest is the large increase in demand from 1946 on. The largest single jump recorded in one year was during 1947 when fueloil sales were almost 39 million barrels more than in 1946. The sale of distillate fueloil in 1950 rose better than 30 million barrels over 1949, the only year during the post war period to slacken off in sales.

The sale of residual fueloil (Table #2) shows a similarly strong picture. Where sales of distillate fueloil in 1934 to 1950 increased 2¾ times, use of residual fuel during this 16-year period jumped from 35,382,000 to 72,716,000, or just slightly better than double. Residual fueloil like the sale of distillate slackened off during 1943-1945, but picked up again in 1946. The greatest gain for residual fueloil in one year was during 1950 when 12 million more barrels were sold than in 1949.

The first national survey covering sales of fueloil by states and principal uses was made in 1926 by E. B. Swanson of the Bureau of Mines under a cooperative agreement with the American Petroleum Institute. This annual study, covering the market for fueloil, was made through 1930 with the financial help of the API but has since been continued by the Bureau.

Copies of this information circular 7630, "A Quarter Century of Fueloil Sales," are available from the Bureau of Mines, United States Department of Interior, Washington, D. C.

TABLE 1
SALES OF FUELOIL FOR HEATING
(Thousands of barrels)
Distillate fuel grades 1, 2, 3 and 4

States by regions	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
California	1,391	1,087	1,637	2,221	2,899	3,806	4,235	6,325	6,128	7,498	7,370	7,396	6,725	5,113
Oregon	527	953	1,085	1,204	1,442	1,540	1,764	2,005	2,127	2,754	3,768	4,515	4,378	5,375
Washington	955	1,447	1,746	2,133	2,557	2,943	3,509	3,907	4,194	5,572	7,183	8,219	8,161	9,816
Arizona	106	81	157	196	240	368	415	462	507	581	601	677	515	454
Nevada	43	87	116	216	292	467	332	528	519	471	582	677	568	541
Idaho	26	28	19	60	97	140	143	160	246	376	516	1,007	970	982
Montana	74	73	99	118	118	100	123	144	315	436	531	541	577	660
Wyoming	55	57	57	75	78	93	87	105	109	141	174	243	241	257
Utah	27	33	39	54	52	120	146	128	176	316	478	583	513	523
Colorado	162	166	192	195	216	193	251	296	353	482	568	719	648	656
New Mexico	39	45	46	50	43	59	58	37	64	110	126	128	98	102
North Dakota	232	240	277	313	318	330	295	276	299	400	503	553	962	1,055
South Dakota	330	370	400	440	424	453	404	363	407	604	724	805	965	1,053
Minnesota	3,412	3,417	4,080	4,862	4,953	5,201	4,474	3,880	4,116	5,172	6,807	7,212	7,581	9,082
Nebraska	1,032	1,034	1,271	1,512	1,584	1,470	1,376	1,416	1,537	1,682	1,974	2,236	1,975	2,028
Iowa	1,156	1,278	1,486	1,766	1,914	2,179	1,898	1,808	1,897	2,315	2,581	3,496	4,013	4,061
Wisconsin	2,780	2,931	3,496	4,242	4,321	4,247	3,771	3,303	3,335	4,098	5,076	5,123	5,187	6,687
Illinois	9,161	9,440	11,084	12,981	13,463	13,769	12,201	12,099	12,371	11,156	12,621	12,677	10,653	13,223
Indiana	1,106	1,100	1,256	1,390	1,517	1,486	1,296	1,390	1,454	1,851	2,730	3,748	3,367	4,682
Michigan	2,745	2,777	3,321	3,910	4,156	4,679	4,208	3,991	4,223	5,197	6,935	7,598	8,613	9,834
Ohio	934	860	890	989	1,161	1,370	1,293	1,268	1,490	1,703	3,003	4,677	4,116	5,384
Kentucky	146	120	135	188	209	192	204	232	235	308	347	618	487	604
Tennessee	113	103	98	105	98	69	121	119	171	261	383	408	441	665
Missouri	3,600	3,583	3,993	4,536	4,617	4,340	3,688	3,361	3,646	4,090	4,250	4,639	3,494	3,768
Kansas	244	265	270	331	334	382	392	379	438	489	543	951	865	843
Texas	592	394	421	435	358	317	232	195	812	1,028	1,027	1,081	1,009	1,174
Oklahoma	261	201	153	161	109	105	73	63	68	74	89	129	184	178
Arkansas	195	164	189	184	195	130	68	63	69	76	79	80	115	118
Louisiana	291	256	239	269	253	362	261	240	249	281	288	299	306	321
Mississippi	48	36	47	50	46	42	39	40	42	49	55	81	112	114
Alabama	40	68	80	77	92	98	142	178	190	276	328	463	486	484
Maine	717	796	907	1,105	1,158	1,016	866	823	855	1,079	1,766	1,840	1,988	2,738
New Hampshire	896	871	1,029	1,220	1,239	1,034	775	648	726	809	1,106	1,130	1,519	2,379
Vermont	424	400	451	547	595	550	443	456	518	565	632	661	834	847
Massachusetts	7,657	7,735	9,216	11,029	11,777	9,658	8,572	8,246	9,164	10,417	16,204	17,066	15,918	17,932
Rhode Island	1,622	1,744	2,006	2,410	2,492	2,426	2,181	2,219	2,462	2,709	2,865	3,007	2,886	3,188
Connecticut	3,856	3,701	4,165	4,936	4,915	4,548	4,335	4,340	4,587	5,145	6,829	8,443	7,581	8,645
New York	17,510	17,733	21,450	25,215	25,822	25,245	23,741	22,639	24,134	27,306	30,802	34,561	34,832	38,483
New Jersey	7,832	7,863	9,181	11,022	11,165	11,899	10,992	10,832	12,750	14,390	18,147	20,992	19,321	21,472
Pennsylvania	4,326	4,378	4,996	6,064	6,208	6,085	6,074	5,792	6,164	7,192	13,109	13,838	11,889	15,984
Delaware	336	284	292	301	347	395	339	367	408	480	661	735	884	1,046
Maryland	1,340	1,334	1,620	2,205	2,472	2,734	2,552	2,562	3,065	3,641	5,923	6,981	6,096	7,155
District of Columbia	1,004	1,012	1,163	1,583	1,759	1,819	1,556	1,419	1,565	1,770	2,216	2,235	1,784	1,990
Virginia	730	707	921	1,067	1,187	1,321	1,172	1,067	1,104	1,384	2,397	2,624	2,262	4,058
West Virginia	57	48	58	63	61	55	82	78	96	105	76	104	190	195
North Carolina	262	253	324	403	391	497	439	502	751	1,073	1,250	1,591	1,671	2,001
South Carolina	145	118	144	168	172	197	174	183	231	348	527	578	628	658
Georgia	185	232	261	322	355	353	269	277	352	485	517	837	718	723
Florida	513	485	568	610	637	624	520	518	623	892	1,092	1,222	1,061	1,076
Total United States	81,235	82,388	97,131	115,533	120,908	121,506	112,581	111,729	121,342	139,637	178,359	200,024	190,387	220,947

TABLE 2
SALES OF FUELOIL FOR HEATING
(Thousands of barrels)
Residual fuel grades 5 & 6

States by regions	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
California	3,040	2,391	2,102	2,085	2,814	3,269	4,074	4,403	4,562	5,660	5,200	4,369	3,279	3,279
Oregon	1,002	845	888	898	824	1,015	1,084	1,554	1,750	2,278	1,653	1,545	1,106	1,505
Washington	1,736	1,482	1,490	1,590	1,806	1,895	1,667	1,677	1,950	2,470	2,346	2,532	2,353	2,964
Arizona	9	12	16	19	32	47	61	66	17	28	38	23	26	11
Nevada	70	48	103	59	52	113	142	101	71	73	74	65	77	120
Idaho	5	9	6	—	2	8	7	—	2	—	—	5	82	132
Montana	27	23	35	31	27	10	63	62	50	57	55	13	95	134
Wyoming	2	4	—	2	—	—	7	3	4	17	20	10	22	38
Utah	8	5	—	—	—	—	4	6	2	—	—	—	57	122
Colorado	37	34	15	18	14	16	11	—	—	2	3	1	109	125
New Mexico	14	14	11	11	8	6	5	—	—	—	—	—	2	3
North Dakota	38	32	22	12	14	10	6	—	—	—	1	12	4	6
South Dakota	50	49	39	21	32	23	18	14	10	13	12	25	20	67
Minnesota	774	688	540	622	708	581	530	388	408	362	287	297	469	791
Nebraska	283	295	272	285	297	238	216	162	151	133	146	86	197	224
Iowa	311	344	337	351	389	309	267	162	154	162	125	91	255	480
Wisconsin	827	818	848	909	970	827	726	502	539	589	724	785	550	680
Illinois	4,168	4,143	4,386	5,035	5,297	5,563	4,949	4,599	4,866	5,177	5,393	4,898	4,834	6,037
Indiana	549	553	644	751	821	758	643	535	580	625	666	597	785	1,045
Michigan	1,075	1,194	1,586	1,701	1,699	1,806	1,543	1,779	1,807	2,029	2,268	2,059	1,896	2,580
Ohio	153	157	193	249	227	237	195	149	190	197	280	246	562	857
Kentucky	119	113	94	94	65	86	156	130	119	115	111	69	136	150
Tennessee	1	3	—	—	6	5	71	105	85	95	90	131	177	183
Missouri	1,622	1,672	1,770	1,899	1,911	1,730	1,698	1,412	1,621	1,514	2,069	2,132	1,481	1,729
Kansas	165	142	146	161	121	80	95	169	239	214	186	159	528	691
Texas	298	221	175	191	160	117	104	55	73	75	215	211	1,304	1,344
Oklahoma	112	141	110	101	70	13	—	1	1	2	—	18	186	190
Arkansas	4	9	—	—	—	3	—	53	50	55	65	5	258	231
Louisiana	174	132	117	105	104	94	56	46	46	50	51	84	502	589
Mississippi	20	21	8	—	—	—	—	—	—	—	—	2	5	7
Alabama	15	20	6	—	—	1	6	8	12	11	30	35	54	146
Maine	243	203	209	261	259	208	186	141	163	182	142	137	263	287
New Hampshire	134	138	166	183	191	300	248	214	229	242	270	97	201	251
Vermont	26	19	85	103	110	108	86	56	67	81	85	70	51	84
Massachusetts	3,375	3,681	4,035	4,737	4,741	4,313	3,503	3,250	3,828	4,597	7,298	8,071	7,108	7,731
Rhode Island	572	635	755	916	915	822	695	575	579	711	1,362	1,510	1,771	2,633
Connecticut	919	1,071	1,239	1,539	1,601	1,639	1,158	1,066	1,441	1,599	2,092	3,968	4,250	5,146
New York	6,501	7,022	8,164	10,078	10,227	10,262	8,954	8,564	9,122	10,362	11,487	12,265	11,921	14,638
New Jersey	2,162	2,358	2,871	3,434	3,547	4,211	3,883	3,432	3,642	4,035	5,392	5,865	6,920	7,332
Pennsylvania	2,974	3,190	3,421	3,831	4,014	4,266	3,515	3,138	3,383	3,596	3,909	4,174	3,376	3,924
Delaware	21	37	40	60	41	151	137	90	76	85	95	80	218	230
Maryland	533	594	665	806	861	849	661	698	783	851	750	753	862	1,327
District of Columbia	502	561	597	651	678	681	554	578	641	727	668	575	745	888
Virginia	156	206	266	297	290	242	210	152	166	187	265	173	208	618
West Virginia	5	2	—	—	1	—	—	—	—	—	—	2	110	96
North Carolina	36	60	50	58	45	31	25	20	18	20	21	—	38	43
South Carolina	19	17	1	4	8	11	5	5	6	8	6	7	20	27
Georgia	55	67	94	92	89	63	55	44	43	58	85	48	494	532
Florida	441	460	484	596	518	466	400	310	328	390	367	339	447	469
Total United States	35,382	35,935	39,101	44,846	46,606	47,483	42,670	40,474	43,874	49,734	56,402	58,639	60,414	72,716

Meeting *at which members of the Petroleum Education Committee explained the objectives of their program to junior high and vocational high school counselors of the Board of Education of the City of New York.*

N.Y.C. Counselors told of oilburner Courses

A PORTION of the regular monthly conference of junior high and vocational high school counselors of the Board of Education of the City of New York held on February 15 was devoted to an explanation of the work being performed by the Petroleum Educational Commission of the Advisory Board for Vocational and Extension Education. The counselors advise the students on courses available in the schools.

Betty Hawley Donnelly, secretary of the Advisory Board, spoke briefly on the purposes of the 53 trade commissions that have been organized and then introduced L. T. White, Cities Service Oil Co., and chairman of the Petroleum Committee. He outlined the background of the formation of the Committee, explained the pressing need for adequately trained personnel and declared that the system of vocational high schools in New York City offered a prime source for such personnel.

Mr. White called upon O. F. Minor, Shell Oil Co., for details of the program as it applied to training students that can be used in the many service stations in New York City; A. J. Sbare, Sbare Automatic Heat, Inc., presented a similar discussion of the use the oilheating industry can make of the vocational high school graduate and J. J. O'Connor, Power magazine, covered the field of industrial lubricants. Each described the job requirements in his respective segment of the petroleum industry and discussed the opportunities for advancement.

The actual school training program for oilburner instruction got under way last September, with students handpicked after completing three years of electrical training. They are being given a final year of oilburner schooling and eventually it is intended to institute a complete three year oilheating course for students in the vocational high schools. Three schools presently are participating. In addition, the same three schools have instituted a schedule of training and refresher courses on controls and fuel units for men already employed in the oilburner field.

API Booklet tells of the Advantages of Fueloil

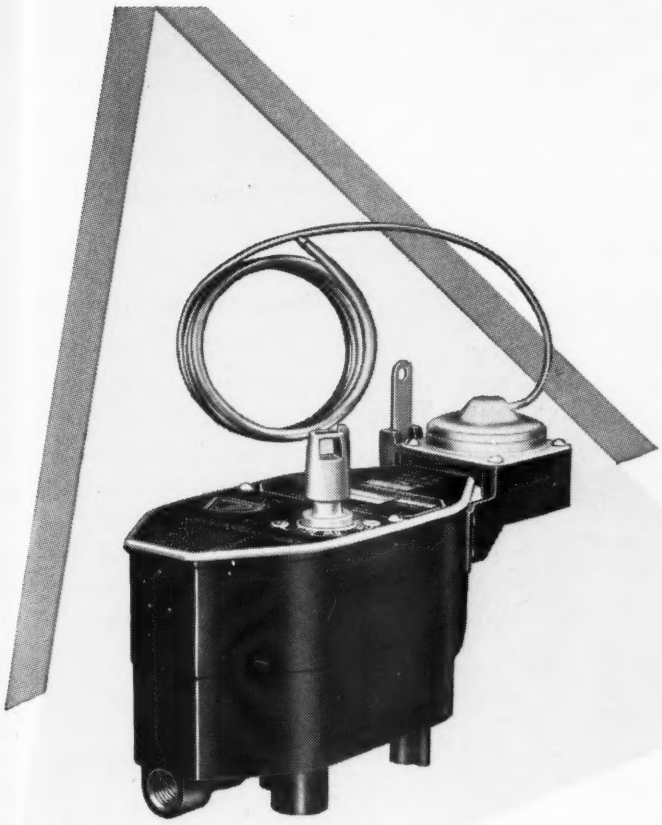
"PROMETHEUS WAS A PIKER" is the title of a small booklet, devoted exclusively to the advantages of fueloil and sized to permit dealers to enclose it with their correspondence or invoices. Theme of the booklet is that Prometheus, the Firebringer of Greek mythology, who stole fire from the Gods and gave it to humanity, if alive today would be the first to admit he was a piker, particularly if he owned an oilfired home heating plant. "Why, if he could turn on his burner in the fall and keep his home comfortable until spring without lifting a finger he would think he was back in heaven again," says the booklet.

Prometheus, described as the first person to make pottery of baked clay, is likened to the thousands of fueloil distributors, most of whom are independent business men like himself. The booklet explains that Prometheus would understand the efforts they make to keep their fueloil customers happy and "he would approve of automatic delivery systems that make sure the tanks of users never run dry and of the establishment of deliveries and burner servicing on a round-the-clock basis."

The Firebringer, says the booklet, would be impressed by the millions of basement oilburners in use, the number of industries and defense forces that depend on petroleum and the number of new homes being equipped with automatic heating. "But," it concludes, "we have a hunch he would not be greatly surprised by this trend. After all, Prometheus and Petroleum both spell Progress."

The booklet was prepared by the Oil Industry Information Committee of the American Petroleum Institute. Copies may be secured from the Committee, which is located at 50 West 50th St., New York 20, N. Y.

R. C. Drew was recently appointed sales representative, L. J. Mueller Furnace Co., Milwaukee, Wis., serving the territory of southern Michigan and the northern parts of Indiana and Ohio. He will work out of his home in Bowling Green, Ohio.



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Fueloil Program for East Coast issued by PAD

FORMAL INSTRUCTIONS WERE ISSUED by Petroleum Administration for Defense on how East Coast heating oil distributors can go about getting additional supplies to meet threatened shortages.

These instructions were issued, however, independently of the voluntary agreement under which 11 majors and one independent have agreed to move up from Gulf points three million barrels of additional oil which the PAD foresees as the possible East Coast shortage for the remainder of the heating season.

In the face of rejection by the Office of Price Administration of PAD's recommendation for increased distillate fueloil price ceilings on the East Coast and collapse of an OPS subsidy scheme, these 12 companies agreed to transport the additional oil needed at an estimated loss of five to eight million dollars. These 12 companies were promised, however, that the heating oil price situation would be reviewed and a report made no later than June 1, 1952. It is expected by some informed observers that a 1¢ or more increase will be granted.

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You'll admire Eddington Oil Burner Filters as much as we do, after you've used them. Because you'll find they reduce service interruptions to a minimum; require infrequent cartridge change; keep customers happy. The Eddington framed above is BIG in filter area, does an efficient filtering job. Another nice thing about it—you can replace it without breaking the oil line. Interchangeable with other makes, of course.
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U. S. Department of Labor Fueloil Prices (December)

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published. Those in the table that follow were taken December 15 (cents per gallon):

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	15.07	14.57	12.60	..
Manchester	15.40	14.90	13.30	..
Portland, Me	14.40	14.40	12.40	..
[3] Buffalo	14.95	..	13.74	13.74
[4] New York	..	..	12.71	..
Philadelphia	..	13.43	12.20	..
[1] Chicago	14.83	14.48	13.57	13.57
[4] Detroit	..	15.04	14.01	..
Milwaukee	..	15.04	14.10	14.00
[1] Baltimore	..	13.36	12.44	..
[1] Wash., D. C.	..	13.84	12.85	..
Jacksonville	..	14.87	13.25	..
Norfolk	..	13.60	12.20	12.20
Richmond	..	14.00	12.60	..
[2] Savannah	..	16.58	13.97	..
[5] New Orleans	..	14.33	12.77	12.77
Portland, Ore.	..	14.50	12.10	6.90
[6] San Francisco	..	13.87	11.54	6.85
[4] Seattle	..	15.33	13.20	7.11

[1] Prices include 2 percent tax.
[2] Prices include 3 per cent tax on all fuels, plus an inspection tax of one cent per gallon on kerosene only.
[3] Prices include 1 percent tax.
[4] Prices include 3 percent tax.
[5] Prices include 3 percent tax on all fuels except gas; prices for kerosene and fueloil No. 1 also include one cent per gallon State health tax, and 1/32 of one cent per gallon State inspection tax.
[6] Prices include 3.5 percent tax on all fuels except gas.

Move to reverse OPS Ruling on Navy Special by PAD seen

EFFECTIVE FEBRUARY 15, the Office of Price Stabilization set a ceiling price on Navy special fueloil, which is a residual type petroleum fuel sold only to the U. S. Navy, and which meets certain technical specifications.

Supplementary Regulation 5 to Ceiling Price Regulation 17 states that OPS ceiling prices per 42-gallon barrel for Navy Special fueloil f.o.b. shall be: San Francisco Bay area, $2.20;

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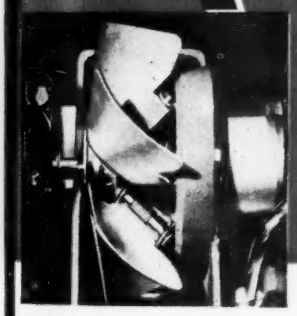
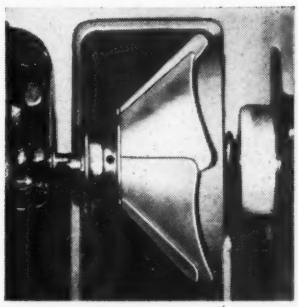


AIR-SEEL fan in "on" position.



AIR-SEEL fan in "off" position.

By "closing the door" on heat-wasting cold air during "off" period, Silent Glow's AIR-SEEL saves heat . . . fuel . . . and fuel dollars. The patented AIR-SEEL fan is scientifically designed with blades that automatically fold flat against each other when burner stops. This exclusive feature "seals" the heat within the heating plant . . . and, unlike ordinary burners, prevents the passage of cold basement air through the intake into the system.

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That all adds up to a "dollar-saving" story that's easy to tell, easy to sell . . . and is a business-building opportunity you can't afford to miss.

Sell AIR-SEEL and you're sure of more profitable oil burner sales!

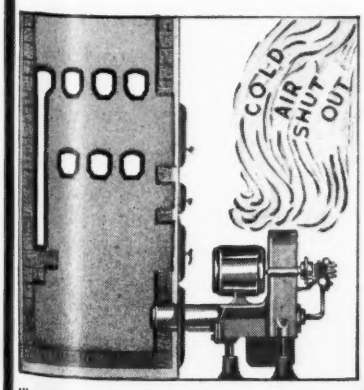

Illustration above shows how AIR-SEEL prevents intake of cold air.

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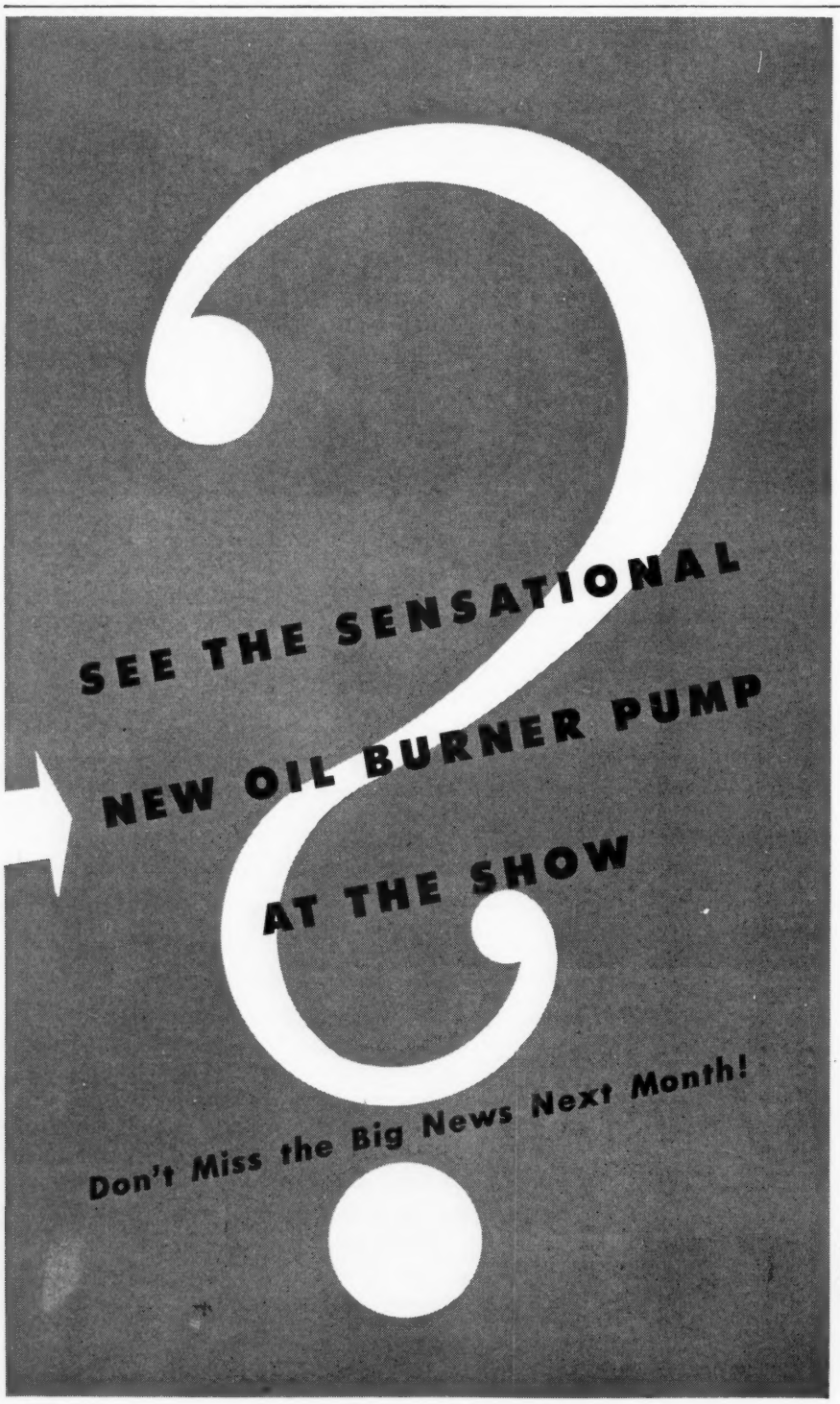
all California area south of San Francisco, $2.15; Gulf Coast ports, $2.10; Atlantic Coast ports of New York, Philadelphia and Baltimore, $2.70.

The setting of a ceiling price by Price Stabilizer Michael DiSalle is expected to bring a protest for withdrawal by Secretary of Interior Oscar L. Chapman who is also head of the Petroleum Administration for Defense. It is believed that this action by DiSalle was made without the knowledge or approval of Office of Defense Mobilization chief Charles E. Wilson to whom Secretary Chapman is expected to lodge his appeal for reversal of the OPS order.

Mr. Wilson's office said that it had given OPS approval informally but had no advance word of final clearance or of Mr. DiSalle's intension to use the order.

Secretary Chapman, acting as PAD administrator, recommended that OPS set a price of $2.17 per barrel f.o.b. Gulf with upward adjustments, if needed. Following the rejection of his plan by OPS, the matter was referred to ODM for final decision.

The issue in dispute is whether a flat ceiling price, particularly $2.10 Gulf, covers the costs of producing Navy Special.



Fueloil Trucks surveyed by New Jersey Association

A SURVEY, completed recently by the Fuel Oil Distributors Association of New Jersey, Newark 2, N. J., was undertaken to determine truck capacities and delivery efficiency. Of the 264 trucks covered, 93 of them were operated in metropolitan areas, 117 in suburban sections and 54 in rural neighborhoods.

The 93 metropolitan trucks averaged 2,123 gallons capacity, with average pumping speeds of 51 gpm. Suburban trucks were smaller, 1,743 gallons average capacity, and rural trucks averaged only 1,569 gallons. Both suburban and rural trucks in the survey had average pumping capacities of 42 gpm.

The significant figures in the survey are developed, however, in the average number of gallons of fueloil delivered by the trucks on an average day. Despite the larger capacity of the metropolitan trucks, they only averaged 4,973 gallons per day. Suburban trucks averaged deliveries of 4,871 gallons per day, and rural units made the best showing of all three, accounting for average deliveries of 4,990 gallons.

All three classes of trucks averaged about the same time necessary to prepare for delivery after the truck has come to a stop, plus the time required after delivery is completed, ticket signed and hose rewound on the reel. Metropolitan and rural trucks were found to average exactly 9 minutes for this function and suburban trucks only slightly longer, 9 3/10 minutes.

A logical reason for the small average daily deliveries of the larger metropolitan fueloil trucks that were covered in this survey was developed by the discovery that in the cities trucks required 5.6 minutes to travel a mile, while in suburban sections only 3½ minutes was needed and 3⅜ minutes in rural areas.

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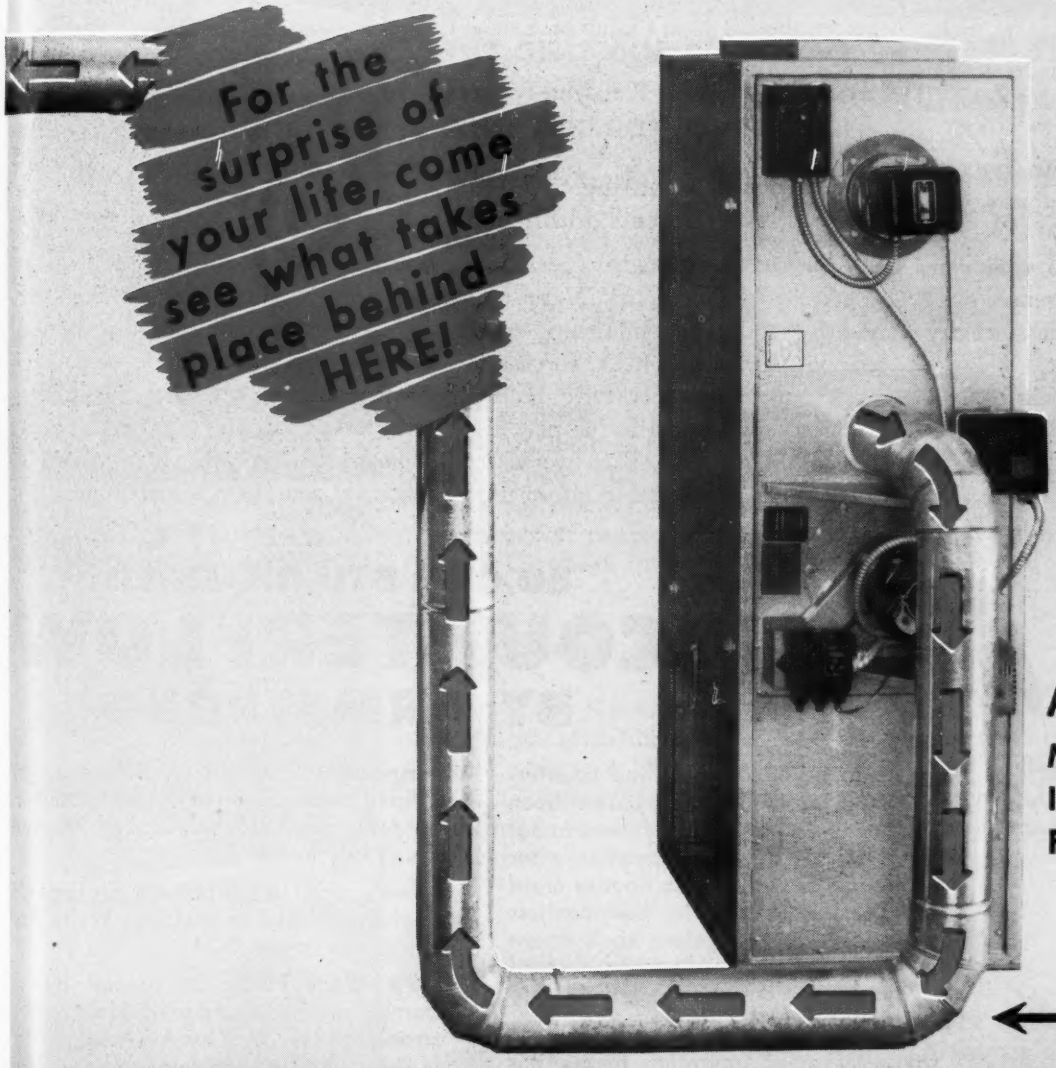

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Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

Northwest Petroleum holds 29th annual Convention

THE NORTHWEST PETROLEUM ASSOCIATION, Minneapolis, Minn., an organization of oil jobbers, held its 29th annual convention at the Radisson Hotel in Minneapolis, January 24 and 25.

Jobbers attending the two-day program heard three major addresses. One by John Harper, Harper Oil Co., Long Island City, N. Y., and chairman, National Oil Jobbers Council, who spoke on, "Jobber Problems." Henry M. Baskerville, president, Western Oil & Fuel Co., Minneapolis, Minn., outlined "The Future of Petroleum in the Upper Midwest," and "The Jobbers' Responsibility" was the title of a talk given by John L. Bero, Bero Oil Co., Duluth, Minn. Exhibit booths and business sessions rounded out the convention activities.

A stag banquet, an annual feature at the convention, was held the first evening.

Oil Men's Club hears Talk by vice-president, Texas Co.

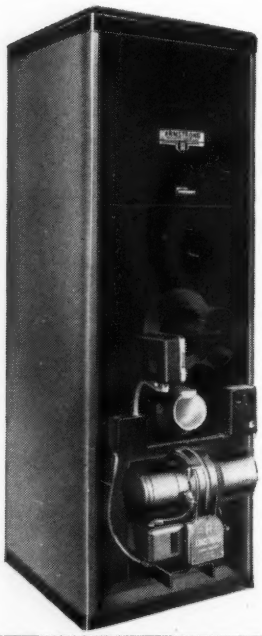
GEORGE ROCK BRYANT, vice-president, Texas Co., Houston, Tex., spoke on "The Oil Industry—A Proud Record" before the Oil Men's Club of Kansas City, Kansas City, Mo. monthly meeting held at the Hotel President, February 18.

Six perimeter heating Worksheets published

SIX NEW WORKSHEETS have been published by the National Warm Air Heating and Air Conditioning Association, Cleveland 14, O., for use in designing various perimeter heating applications outlined in the new edition of Manual #4. Each worksheet has complete step-by-step information for designing the system including the necessary charts and tables and are prepared so that they can be used separately from the manual.

These worksheets are: Form 41-A, perimeter loop system for concrete slabs for installations up to 60,000 Btu/hr; Form 41-B, perimeter loop system for concrete slabs for installations above 60,000 Btu/hr; Form 42, perimeter radial system for concrete slabs; Form 43, perimeter crawl space duct system; Form 44, perimeter crawl space plenum systems, and Form 45, perimeter crawl space extended plenum systems.

Form 41-B discusses perimeter heating in large buildings. It outlines the design methods for systems installed in concrete slabs for structures having a heat loss up to 100,000 Btu/hr. For buildings having a greater heat loss, Form 41-B recommends that two or more furnaces should be used, each with a separate perimeter system. One advantage of using multiple furnaces individually controlled is the ability to provide zone heat distribution.



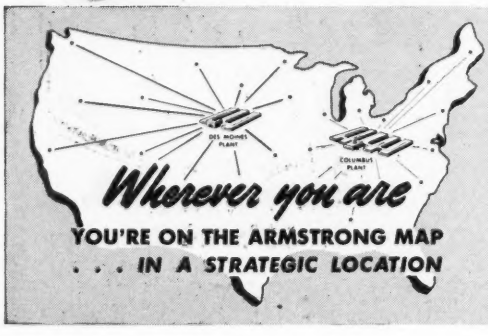
New! 80,000 BTU OIL-FIRED COUNTERFLOW BY ARMSTRONG

Here's the 80,000 BTU oil-fired counterflow winter air-conditioner you've been waiting for . . . produced by Armstrong! Brand new . . . designed specifically for the increasingly popular slab floor or crawl space construction in the basementless one-floor-plan home. Return air is drawn into the top of the unit; heated, filtered air is forced out through the bottom into the underfloor duct system.

Unusually quiet operation makes this unit ideal for installation in a closet or utility room surrounded by living quarters. Equipped with the Armstrong D4 oil burner, especially designed for efficiency at low firing rates. Compactly built; built-in filter rack; two-tone blue baked enamel finish. Easily installed.

There's profit in this unit—it fits today's market like a hand in a glove. Write for specification sheet S-24.

FOR GAS TOO. A special gas burner has been designed by Armstrong, and is listed by AGA for use in this unit. Thus the furnace can be converted from one fuel to another at any time. BTU output is the same with either fuel.



Armstrong's two huge plants serve both sides of the continent quickly, economically. A warehousing distributor, with a complete Armstrong inventory, is within a stone's throw of everywhere. Wherever you are, Armstrong's distribution system is set up to serve you. It's better, quicker, more profitable . . . for you.

ARMSTRONG FURNACE COMPANY

COLUMBUS, OHIO — DES MOINES, IOWA

Please address Dept. FO at our plant nearest you.

Warm Air Furnaces—Gas, Oil, Coal—a Complete Line

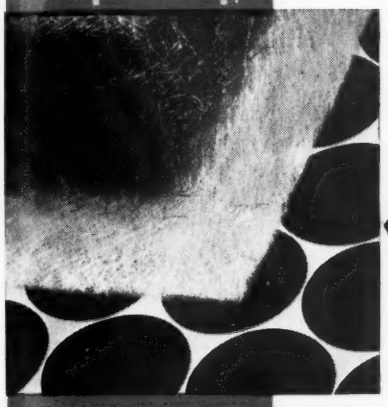
SELL THE PROFIT LINE

Glasfloss AIR FILTERS

3 PRODUCTS—30%-50% MORE PROFIT

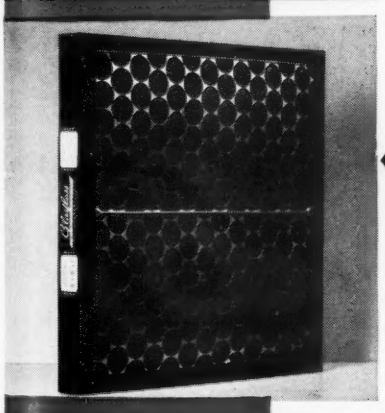
THE ONLY COMPLETE LINE OF GLASS FIBRE AIR FILTERS FOR FORCED AIR HEATING, VENTILATING AND AIR CONDITIONING.

Wherever disposable air filters are used—in homes or industry—the Glasfloss line triples your sales potential at 30-50% greater profit. It pays to sell the best—Sell *Glasfloss*.



1 *Glasfloss* THE I-S TYPE

For peak air filtering efficiency, the GLASFLOSS I-S Air Filter is the answer. A strainer mat has been added to the famous long, glass fibres that make up the standard GLASFLOSS Air Filter pad. The combination of two filters in one brings air filtering efficiency to as high as 95%. No other air filter on the market can compare. Figured on Peak Efficiency you win with Glasfloss.



2 *Glasfloss* STANDARD TYPE

This is the conventional type—the filter most in demand. The long, fine glass fibres provide a greater surface area to catch and hold more dust with less air resistance. The Glasfloss STANDARD Filter is for home heating, air conditioning equipment and normal industrial installations. Available in all standard sizes. Competitively priced to beat the field.

3 *Glasfloss* ROLL-PAK TYPE

Here is a product carefully planned for bulk users. Cut your own filter pads—fit them into your own frames and save as much as 30% of your normal air filter costs. Available in rolls, 40″ wide and 10′ long and 1″ and 2″ thickness. Application is easy. Just roll it out, cut to size and put into position. The fluffy, fine fibres are easy on the hands. For Economy in bulk usage it's Glasfloss all the way.

For Complete details on any product in the GLASFLOSS Line, write Dept. F-1.

Glasfloss 155 EAST 44th STREET, NEW YORK 17, N. Y.

Warm air Group names two new Committees

THE OPPORTUNITY for the application of warm air heating in its various forms for industrial and commercial applications are almost unlimited and the industry has barely scratched the surface were the opinions voiced at the first meeting of the Industrial and Commercial Warm Air Furnace Committee, one of two new committees formed by the National Warm Air Heating and Air Conditioning Association, Cleveland 14, O.

Members of the committee are: Chairman, R. C. Jaye, Syncromatic Corporation; M. W. Bowen, Certified Furnace Co.; Bowen Campbell, Campbell Heating Co.; Roger P. Campbell, E. K. Campbell Co.; Wm. J. Klingberg, American Foundry & Furnace Co.; Wm. H. Lauer, Columbus Heating & Ventilating Co.; W. J. MaGirl, MaGirl Foundry & Furnace Co.; Arthur A. Olson, Arthur A. Olson Co.; L. S. Redford, Jackson & Church Co., and E. M. Tarnoff, Prat-Daniel Corp.

The application of warm air heating for industrial and commercial buildings, the committee believes, does not necessarily mean that only large furnaces are needed. They point out that in many installations, a number of smaller furnaces can be used advantageously.

The traffic committee was the second group formed to cooperate with the Association's Traffic Counselor in protecting the best interests of the warm air heating industry in the many pending interstate commerce freight rate increases and classification cases.

Members of the new Traffic Committee are: Chairman, E. F. Hurkman, Lennox Furnace Co.; W. F. Lamb, Affiliated Gas Equipment, Inc.; Charles K. Umbarger, The Coleman Co.; Charles C. Warwick, Rheem Manufacturing Co., and Carl J. Beckstedt, Williamson Heater Co.

A. P. Frame speaks at OHI chapter Luncheon

A. P. FRAME, Assistant Deputy Administrator, Domestic Petroleum Operations, Petroleum Administration for Defense, spoke before the Oil-Heat Institute of Greater Washington, Washington, D. C., at its luncheon meeting held at the DuPont Plaza Hotel, February 19.

Two new members were welcomed at the meeting. They were E. A. Click from Fairfax, Va. and the Vienna Fuel Co., Vienna, Va.

Canadian oil heat Group moves to larger Office

THE OIL HEATING ASSOCIATION, a Canadian organization designed to promote the interests of the oilheating industry in Canada so as to ensure the best service possible to the ultimate consumer, has announced the moving of its office to larger quarters. The new address for the OHA is Room 202, 19 Richmond St. West, Toronto 1, Can.

Oil Jobbers hear consumer Plan at MPA Convention

A PLAN TO ENABLE MARKETERS to receive greater recognition within the industry and a higher appreciation by the consuming public through the use of educational facilities already available in Missouri was introduced by

It's New!
It's Sensational!
The Supertex No-Clog, No-Rot Filter Bag

You waited a long time for this new suction cleaner filter bag. Supertex, the amazing new fabric of which this bag is made, is completely soot and rot resisting.

No oil soot, nor any kind of soot can clog the pores of this bag and stop suction. No acids, nor corrosive elements in soot or dust can rot Supertex. This new bag marks the end of bag clogging and excessive replacement bag expense.

Supertex bags have been tested in actual use for months cleaning all kinds of heating plants. Supertex has not failed once.

Supertex marks the successful results of years of research, study and test by Super engineers and textile experts. Supertex is the first filter bag ever to be made that renders non-clog, no-rot service. It is another "Super First".

Neither soot nor acids can penetrate the pores of this remarkable fabric. Such soot and dusts form a fragile film on the inside surfaces of the Supertex Bag. This film breaks up and falls leaving the filtering area of the bag unobstructed and undamaged.

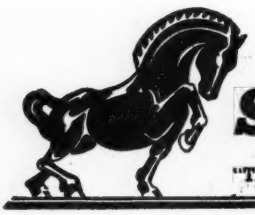
The Supertex bag is now in production. It is supplied on the Super Red Streak Model SH Heating Plant Cleaner at slight additional cost. It also is sold separately for modernizing old cleaners. The price is $19.50.

Call your supplies dealer or write

NATIONAL SUPER SERVICE COMPANY, INC.
1951 N. 12th St., Toledo 2, Ohio

In Canada: Plant Maintenance Equipment Co.
Toronto and Vancouver

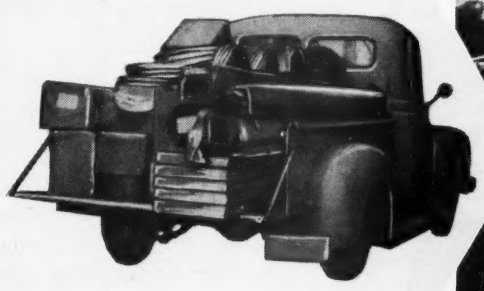
Super Red Streak Model SH
for both wet and dry and hot and cold cleaning equipped with Supertex Filter Bag. Note that Supertex bag is not over-size but of standard compact size.

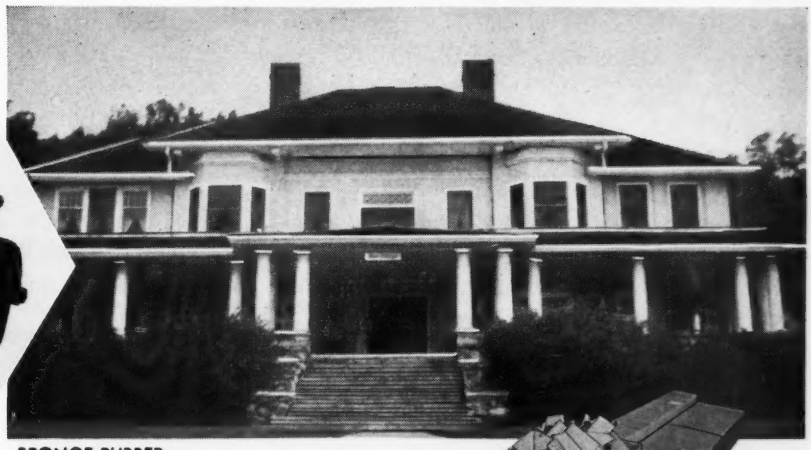


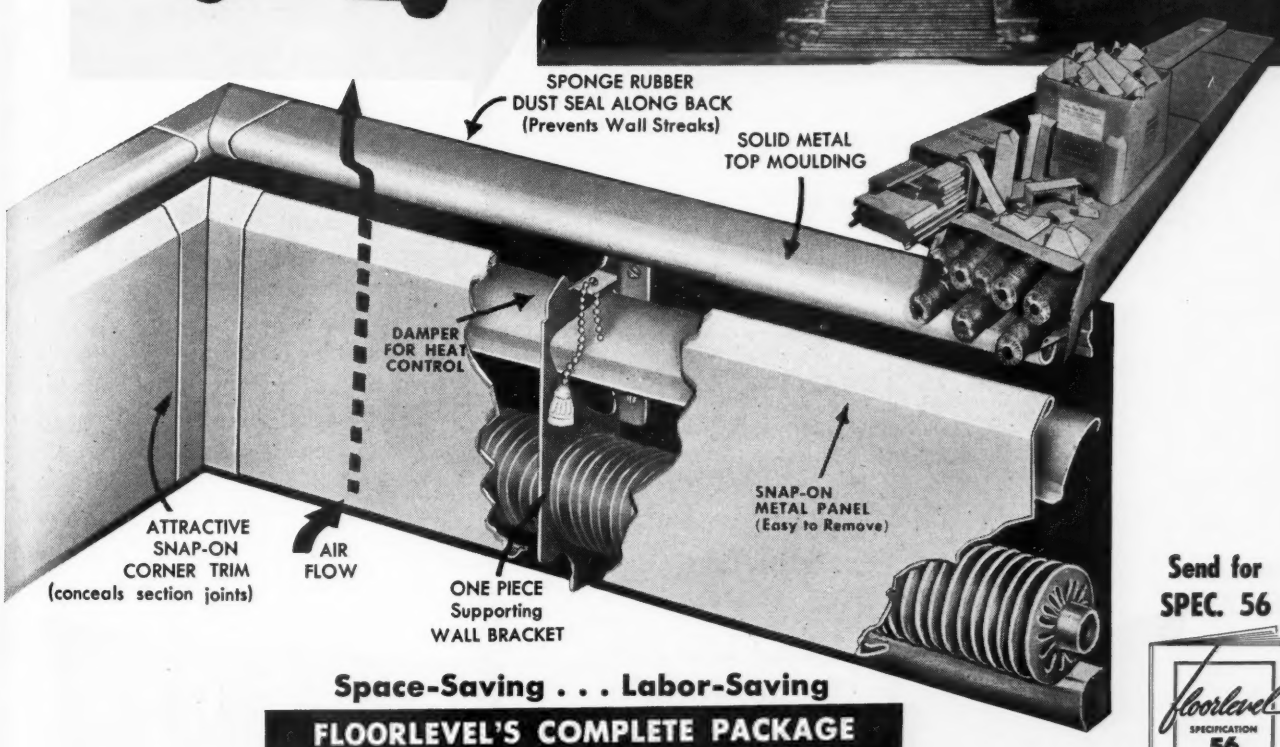
"Once Over Does It"
SUPER SUCTION
SINCE 1911 ®
"THE DRAFT HORSE OF POWER SUCTION CLEANERS"

MICHIGAN "G.A." DISTRIBUTOR INSTALLS THIS BIG JOB of 2200 Sq. Ft. Radiation with only one small Truckload of

FLOORLEVEL
BASEBOARD RADIATION







Space-Saving . . . Labor-Saving
FLOORLEVEL'S COMPLETE PACKAGE

G/A's all-in-one Floorlevel package means easier installations every time. Included are: fin-type heating element, front panel, top moulding, wall brackets, inside corners, outside corners, and splices. No special tools are required because of the simplified G/A design; all parts are standard and quickly obtainable.

Send for SPEC. 56

Get the whole story on Floorlevel's profit package that offers you increased sales, profits, and customer satisfaction.

THERE'S A G/A UNIT FOR EVERY TYPE AND SIZE INSTALLATION

floorlevel
HOT WATER BASEBOARD RADIATION

CONVERSION BURNERS

All sizes up to 20 G.P.M. capacity. Featuring the G A vibration-free universal coupling.

BOILER BURNER UNITS

from 200 sq. ft. of radiation . . ready for installation.

WARM AIR UNITS

Compact, Highboy and Lowboy models . . . 85,000 to 200,000 B.T.U. capacity.

Fueloil & oilheat

GENERAL Automatic
GENERAL AUTOMATIC PRODUCTS CORP.
2300 Sinclair Lane • Baltimore 13, Md.

L. T. White, manager of business research and education for Cities Service, New York, N. Y., before 350 oil jobbers at the annual three-day Missouri Petroleum Association convention and trade exhibit at the Hotel Jefferson, St. Louis, Mo., February 4 through 6.

Mr. White pointed out the number of educational institutions already in existence which offer a wide variety of business courses applicable to numerous aspects of oil marketing. He also mentioned specifically what schools offer these courses and persons whom they should contact.

"This public education is free," Mr. White said. "It has been available to farmers, industrial workers and home makers for years. People want business to steadily get better. They want you to prosper and grow. You'll employ more help, and help pay the town's expenses."

Other principal speakers were Joseph F. Leopold, Dallas, Tex., who spoke on "Federal Tax Laws Play Favorites" and J. Fenner Cummins, of Cumberland Oil Co., Nashville, Tenn.

Retiring president Harry E. Milton, president, Milton Oil Co., St. Louis, Mo., appealed to oil jobbers to establish better relations with their suppliers, the industry and the public.

In addition panel discussions were held on the subjects of credit, routing trucks, stock losses, jobber selling and new sales ideas.

The President Hotel, Kansas City, Mo., was selected as the site for the 1953 convention with dates set for February 2 through 4.

Fulflo Filters

Meet your Silent Partner!

This is the RF4 Honeycomb Filter Tube which makes FB4 FULFLO Filter the world's best-selling Oil Burner Filter.

True depth filtration of precision controlled density ensures delivery of microscopically clear oil to the nozzle at all times. Prevents fouled points, clogged nozzles, scored pumps, stuck valves. Stops costly service calls arising from minute oil impurities.

RF4 Honeycomb Filter Tube refill. Six per box, with gaskets and instructions. Fits all 4-inch models of FULFLO Filters.

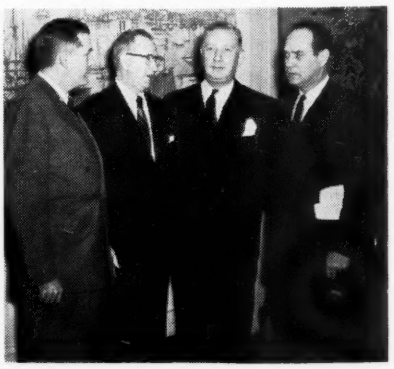
IF YOUR JOBBER CAN'T SUPPLY YOU WRITE OR WIRE US

COMMERCIAL FILTERS CORPORATION
Boston 27, Massachusetts

New England OIIC Group holds 5th annual Meeting

"IF WE VALUE the prestige of our industry, and on our prestige depends our continued freedom from bureaucratic rule, let us keep our family quarrels within ourselves and do not let us wash our dirty linen in public squares or in government lobbies," H. S. M. Burns, president, Shell Oil Co., New York 20, N. Y., stated recently.

Speaking before 1,000 oilmen at the fifth annual meeting of the New England District, Oil Industry Information Committee, American Petroleum Institute, held at the Imperial ballroom, Hotel Statler, Boston, Mass., February 7, Mr. Burns explained the need for presenting to the public the true facts



H. S. M. Burns, president, Shell Oil Co. *(second from right), was the principal speaker at the fifth annual meeting of the New England Oil Industry Information Committee, American Petroleum Institute held in Boston, Mass., February 7. Pictured left to right are Richard D. Drysdale, regional manager, Sun Oil Co., Boston and general chairman of the meeting; Ralph F. Carey, division manager, Shell Oil Co., Boston, OIIC district chairman and national OIIC vice-chairman; Mr. Burns and Adm. H. B. Miller, director of information, API.*

HEIL

Proved Efficiency

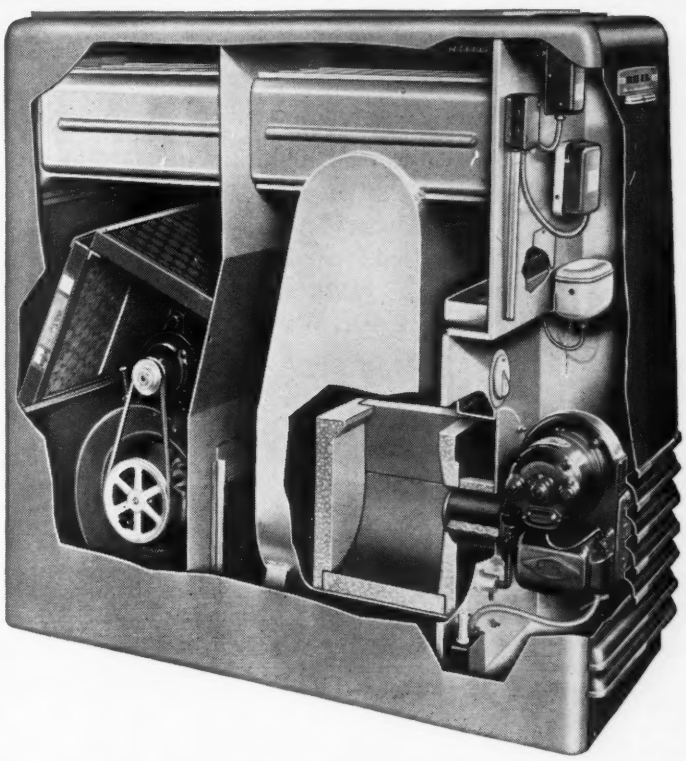
can improve your sales

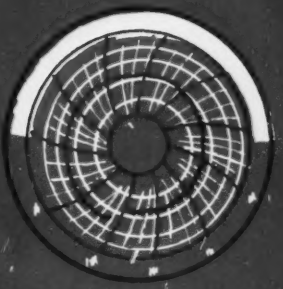
Proved better combustion

HEIL's shaped, rounded combustion chamber promotes better burning, higher CO_2. Government and independent laboratory tests prove it.

Proved better firing

The famous HEIL-engineered burner is matched to the unit. Flame is right size, right shape. When you adjust a HEIL burner, it stays that way.





Proved better heating

Divided, baffled flue passages extract more heat. Heavy gauge steel, ample insulation hold heat in. Result—lower stack temperatures, more usable heat.

Proved better operation

HEIL designed the burner and unit together to match each other. Result—quiet, vibration-free operation, with no mis-fits to compensate for.

You can show your prospects ample PROOF of HEIL's efficiency. You can see and show how HEIL design makes better use of the fuel, how HEIL can give better, more uniform heating. You can demonstrate how HEIL quality construction cuts upkeep. With HEIL, you have a better unit—a unit that is provably easier to sell. Write now for details. You'll *like* dealing with HEIL.

THE HEIL CO.

MILWAUKEE 1, WISCONSIN

District Offices: Hillside, Washington, D. C., Atlanta, Milwaukee, Detroit, Chicago, Minneapolis, Kansas City, Dallas, Los Angeles, Seattle

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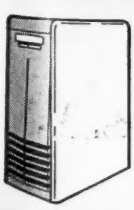
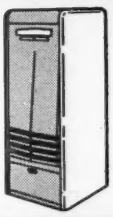
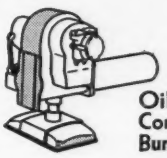


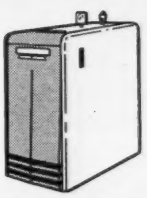
Oil-Fired and Gas-Fired Winter Air Conditioners



Oil-Fired and Gas-Fired Highboys



Oil and Gas Conversion Burners



Oil-Fired Boilers Gravity Gas Furnaces

of the oil industry at all times. He warned of "running to Washington with a tale of woe."

Fred Carpi, vice-president in charge of traffic, Pennsylvania Railroad, supported Mr. Burns' stand when he urged support of measures "which will lift the heavy hand of subsidy and the stifling hand of government from the living arteries of commerce and trade."

In another address, Mrs. Casilda V. A. Wyman of Philadelphia, manager of commercial research for the *Farm Journal,* pointed out the importance of women as a buying group, in that there are now two million more women in this country than men.

Other speakers were Adm. H. B. Miller, USN (Ret.), director of information, API, New York, N. Y., and Charles Z. Hardwick, vice-president, Ohio Oil Co., Findlay, O., and national chairman, OIIC.

The meeting was presided over by Ralph F. Carey, Boston division manager, Shell Oil Co. and district chairman, OIIC. Richard D. Drysdale, Boston regional manager, Sun Oil Co., was general chairman of the meeting.

New Officers and Directors named at Indiana Convention

THE SHEET METAL and Warm Air Heating Contractors' Association of Indiana held its most successful of 34 annual conventions at the Hotel Severin, Indianapolis, February 7 and 8.

Highlight of the convention was the announcement of the new slate of officers for the Association and its auxiliaries for 1952. The newly elected officers are:

President, H. Merle Daily, Hammond; 1st vice-president, T. B. Speaker, Lafayette; 2nd vice-president, Russell A. Harris, Bloomington, and treasurer, Homer Selch, Indianapolis.

Five men on the eight-man board of directors chosen were:

L. D. O'Donnell, Vincennes; Don McCloskey and Frank E. Steward, Indianapolis; V. H. Hazelton, Muncie, and Cleo Fox, Fort Wayne. Directors H. W. Meggs, Wm. E. Garber, Jr., and Earl Troeger were not up for re-election.

The Quarter Century Club, an auxiliary of the Association, also held elections. Elected president was H. A. Beaman, Noblesville; vice-president, V. Hazelton, Muncie, and secretary-treasurer, Homer Selch, Indianapolis.

Another auxiliary, Indiana Fur-Mets, also announced its new officers for the coming year. Named were:

Bill Shirley, president; Bob Hurt, 1st vice-president; Larry Collins, 2nd vice-president; Elza Burke, 3rd vice-president; George Berkheimer, 4th vice-president; Howard Tout, secretary, and Morris Ellsworth, treasurer.

Wisconsin Oil-Heat Group stages special Veep Night

WISCONSIN OIL-HEAT ASSOCIATION, Milwaukee 2, Wisc., at its regular meeting at the Hotel Wisconsin in Milwaukee, Thursday, January 31, held "Vice-presidents' Night," where both vice-presidents LaVern Schaetzel and Lester A. Falk outlined the programs of their respective committees for the coming year.

Other business of the evening concerned plans for the Milwaukee Home Show, to be held at Milwaukee Auditorium, March 15 to 22 and the 29th

Rx Prescribe GENERAL FUEL OIL FILTERS FOR ALL YOUR INSTALLATIONS

Why? Here Are 4 Good Reasons

DELUXE MODEL 2A-300
FOR THE BIG JOBS

MASTER MODEL 2A-700
FOR MEDIUM NEEDS

STANDARD MODEL 1A-25
FOR SMALL HOMES, HEATERS, ETC.

1 There's a GENERAL FILTER for every fuel oil filtering job — large, medium, or small.

2 GENERALS are easy to install. All that's needed is one wrench and a few minutes' work.

3 It takes just two minutes to insert a GENERAL Replacement Cartridge — and every GENERAL installed means cartridge sales for years to come.

4 Customers *WANT* GENERAL FILTERS because they eliminate shut-downs due to clogged nozzles. Costly service "call-backs" are minimized, too.

GENERAL FILTERS now distributes CLEAN RIGHT SOOT REMOVER—Certain-safe for *all* heating plants. Tell your customers about it.

GENERAL FILTERS INCORPORATED
GENERAL FUEL OIL FILTERS
12890 WESTWOOD AVE.
DETROIT 23, MICHIGAN
CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVE., TORONTO 13, ONTARIO

"Weil-McLain provides comfort at the right price," says Chris Punger, Long Island, N. Y. Contractor.

"My object in business is to sell comfort and convenience to the home owner. That's why I push and sell Weil-McLain boilers and radiators. Weil-McLain provides the comfort at the right price.

"I find that Weil-McLain Solray and Raydiant Recessed Radiators are preferred by my customers, because of their modern styling and clean-cut lines.

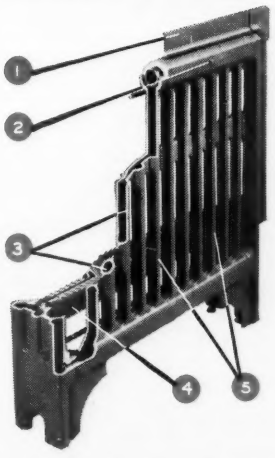
"I like Weil-McLain Boilers for a number of reasons. All parts are well machined and go together nicely, which keeps installation costs at rock bottom. The construction which eliminates face-grinding and the easily handled, short individual tie-rods are also big points in favor of these boilers.

"So it's just plain common sense to stand by the products that are easy to sell and protect your reputation."

WEIL-McLAIN

IT IS MORE PROFITABLE TO SELL *EXTRA VALUE*

1. Neat molding trim closes the recess clearance around the radiator.
2. Frequent venting not necessary because of large waterways.
3. Large waterways store heat—slow down room cooling.
4. Finned vectant provides convected heat.
5. "Live front" radiates sun-like warmth.



for example—

RAYDIANT RECESSED RADIATORS

Here's smart styling—clever designing that home builders and modernizers like! All the comforts of *radiant* warmth, from a source that blends into room decoration. Weil-McLain Raydiant Recessed Radiators are designed *exclusively* for recessing *yet cost no more!* They set flush in the wall —no floor space wasted—no interference with draperies.

Raydiant Radiators are as *efficient* as they are good looking. The "live front" produces a large percentage of radiant heat—sends a flow of sun-like heat rays into the room—keeps floors warm. Cast-iron finned vectants provide an ample volume of convected heat to protect against cold air from the windows.

And finally, because of cast-iron construction and large waterways, Raydiant Recessed Radiators store heat for emission when the thermostat shuts off the heat supply . . . no sharp drop in temperature.

It's easier to sell comfort when beauty comes with it . . . and that's the combination that gives Weil-McLain Raydiant Recessed Radiators *extra value!* For complete description and ratings, send for Bulletin C-125.

WEIL-McLAIN
BOILERS · RADIATORS

WEIL-McLAIN COMPANY
MICHIGAN CITY, INDIANA

Anniversary Oil-Heat Exposition and Convention set for April 14 to 18 in Philadelphia, Pa.

ASME to hold Meeting in March at Seattle

THE SPRING MEETING of the American Society of Mechanical Engineers will be held at the University of Washington, Seattle, Wash., March 24 through 26. A total of 45 papers will be presented by 51 authors at 17 technical sessions sponsored by 13 divisions of the ASME.

Among the papers to be presented are those on the subjects of heat transfer, power and fuels.

Governor of Washington Arthur B. Langlie will welcome the engineers and their guests at the "President's Luncheon" on the opening day.

Educator addresses MOHA monthly Meeting

PROFESSOR F. ALEXANDER MAGOUN, president, Human Relations, Inc., and author of "Love and Marriage" among other books, spoke on "A Look Inside the Customer" at the monthly meeting of the Massachusetts Oil Heating Association, Boston 15, Mass., February 19 at the Hampton Court Hotel, Brookline, Mass.

Iowa oil Jobbers hear prominent industry Leaders

THE 15TH ANNUAL CONVENTION of the Iowa Independent Oil Jobbers' Association, Des Moines 9, Ia., was held at the Hotel Fort Des Moines, in Des Moines, February 19 through 21.

Two formal afternoon sessions were held at which time a number of prominent speakers addressed the oil jobber group.

The speakers at the February 20 session were as follows:

George Potgeter, president, Iowa Associated Businessmen, Steamboat Rock, Ia.

Walter W. Belson, director of public relations, American Trucking Association, Washington, D. C.

H. T. Ashton, manager central region, Socony-Vacuum Oil Co., St. Louis, Mo., and

Edward Wimmer, vice-president, National Federation Independent Business, Cincinnati, O.

Speaking at the second session, February 21, were:

B. L. Majewski, president, Great American Oil Co., Chicago, Ill.

H. Roe Bartle, regional director, Economic Stabilization Agency, Kansas City, Mo., and

Robert Gray, editor, FUELOIL & OIL HEAT, New York, N. Y.

V. W. Smith, Ankeny, was re-elected president of the Association and R. B. Ritter, Waterloo, was named vice-president. L. H. Sidwell, Cedar Rapids, is the new treasurer and J. W. Dennis, Knoxville, was re-elected secretary.

New members named to the board of directors are: John Schultz, Davenport; L. H. Sidwell, Cedar Rapids; F. A. Bogart, Marshalltown; R. B. Ritter, Waterloo; Forest Richards, Humeston; Dan Roberts, Fort Dodge; Darrell Davidson, Clarinda; L. S. Brown, Cherokee and George Iverson, Sioux City.

H. C. Rump, Burlington; I. H. Carnes, Clinton; Lee Threlkeld, Chariton; V. W. Smith, Ankeny; E. F. Bock, Garner, and P. A. Jessen, Exira, all were re-named directors.

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FOR OIL OR GAS
(By Conversion)

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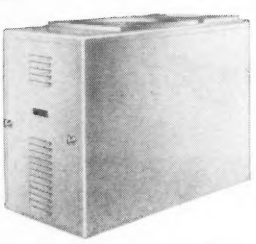

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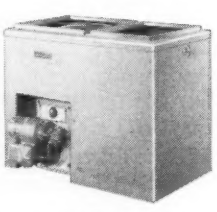

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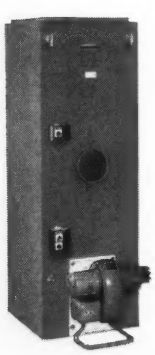

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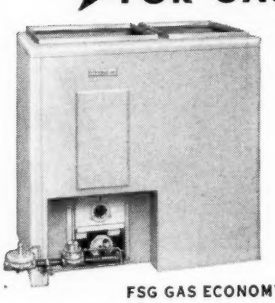

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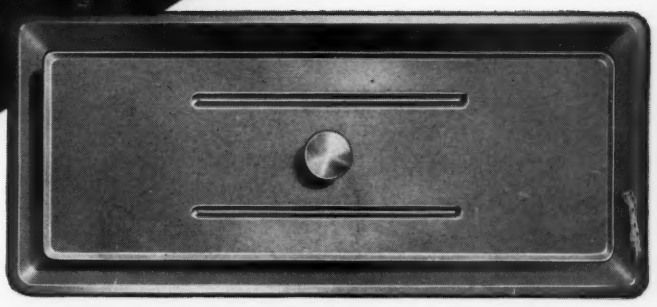
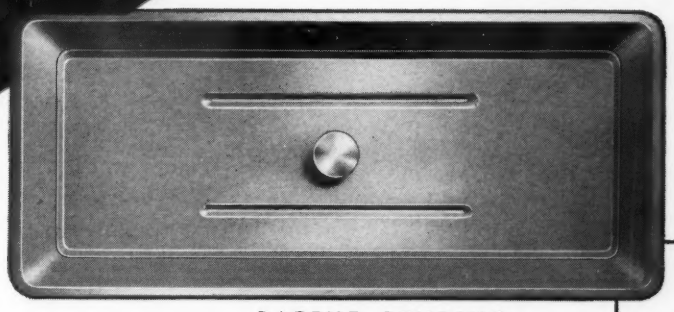


Char-Gale's new Register adjusted to its fully open position.



Char-Gale's new Register as it appears completely closed.

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The new Char-Gale Register opens the door for the 4-inch Duct System. It means savings and satisfaction to both customer and dealer.

In the new Char-Gale register is found the solution to a problem which home-owners, dealers and manufacturers have struggled with, ever since forced warm air heating was started . . . how to avoid drafts and hot blasts of air in a forced warm air system.

This modern attractive register solves the problem, and does it so well, that by stocking just one register you can handle anything from a high velocity down to a conventional forced air system.

Char-Gale New Modern Register *Features*

- No Draft or Hot Blast of Air
- Heat Distributed in All Directions
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CHAR-GALE 4-INCH PACKAGED FITTINGS AVAILABLE NOW FROM YOUR JOBBER

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Meet Mr. 'Yellow Pages'

He's the Classified Directory Representative of the Telephone Company. He'll be coming around to see you.

He can prove to you that advertising in the 'yellow pages' pays. He is familiar with all types of retail establishments in the community, has a good knowledge of the shopping habits of the people and knows a lot about their buying habits. He can offer valuable suggestions for helping you reach more prospects economically.

Watch for the Directory Representative. He's helped hundreds of dealers in many lines build their businesses. Let his knowledge and experience get more sales and service orders for you.

FOR FURTHER INFORMATION, CALL YOUR LOCAL TELEPHONE BUSINESS OFFICE

I-B-R publishes Ratings on Baseboards and Boilers

THE INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS has published a 68-page booklet entitled, "I-B-R Ratings for Cast-Iron Boilers and for Baseboards of All Types," which for the first time combines in one booklet approved I-B-R ratings for baseboards and boilers.

I-B-R ratings for cast-iron boilers and baseboards of all types are approved by the Institute after tests conducted by the various manufacturers under terms of the I-B-R testing and rating code.

To facilitate the use of the booklet for reference purposes, the section on baseboards is printed on paper which differs in color from that used for the boiler section.

The booklet will be useful to all people who are concerned with the specifications, design, sales or installation of hot water and steam heating systems. The book will be included in the textbook material for students in the I-B-R School of Modern Heating.

API receives Award from Public Relations Group

AWARD of a "Certificate of Public Relations Achievement" has been made to the American Petroleum Institute by the American Public Relations Association. The Oil Industry Information Committee, which plans and operates the Institute's public relations program, received the certificate at the Association's 7th annual convention in Philadelphia recently.

The citation, accompanying the certificate, lauded the OIIC program for "its astute understanding and skill" in pinpointing for the American people the significant facts about the oil industry's role in the nation's economy.

New Slate of Officers at 58th ASHVE Convention

ERNEST SZEKELY, president, Bayley Blower Co., Milwaukee, Wis., was elected president of the American Society of Heating and Ventilating Engineers at its 58th annual meeting at St. Louis, Mo., January 29.

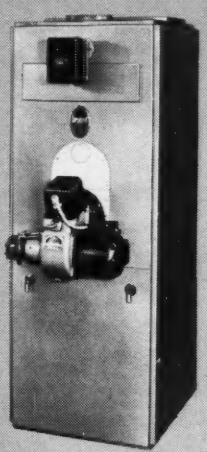
Other officers elected were: first vice-president, R. F. Taylor, consulting

"We don't expect dealers to be magicians"

says Lee Williams,

Bryant-Williams Company, Pittsburgh, Pa.

We may be old-fashioned, but we believe you dealers are in business to make money. Not just to turn over dollars, but to make a legitimate profit on a decent volume of sales. That's one reason we at Bryant do everything possible to *protect your profit margin*—give you top-quality, dependable products; permit you to save on installation costs; back you with technical assistance when you need it; and finally, help you promote and *sell* the more profitable jobs. No, we don't expect dealers to be magicians—to keep up a family, and a business, on profitless turnover. If this fits with your thinking, you'll be interested in Bryant's aggressive program for '52. We're going to make money, and help *you* make money. Your Bryant Distributor will give you the facts. Or write Bryant Heater Division, Dept. 42, Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10, Ohio.



Bryant Oil-Fired Warm-Air Furnaces

Broad line, including gravity, forced-air and perimeter heating units. Output ranges from 81,000 to 230,000 Btu per hour. Time-proven pressure-type burner, UL Approved. Sturdy, compact construction.

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IN HEATING,

AIR CONDITIONING,

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"Visit us at Philadelphia (Booth 352, Oil Heat Exposition), April 14-18"

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engineer, Houston, Tex.; second vice-president, L. N. Hunter, vice-president of research, National Radiator Co., Johnstown, Pa., and treasurer, J. Donald Kroeker, consulting engineer, Portland, Ore.

The Society also announced new members of the Council, ASHVE governing body, and the committee on research.

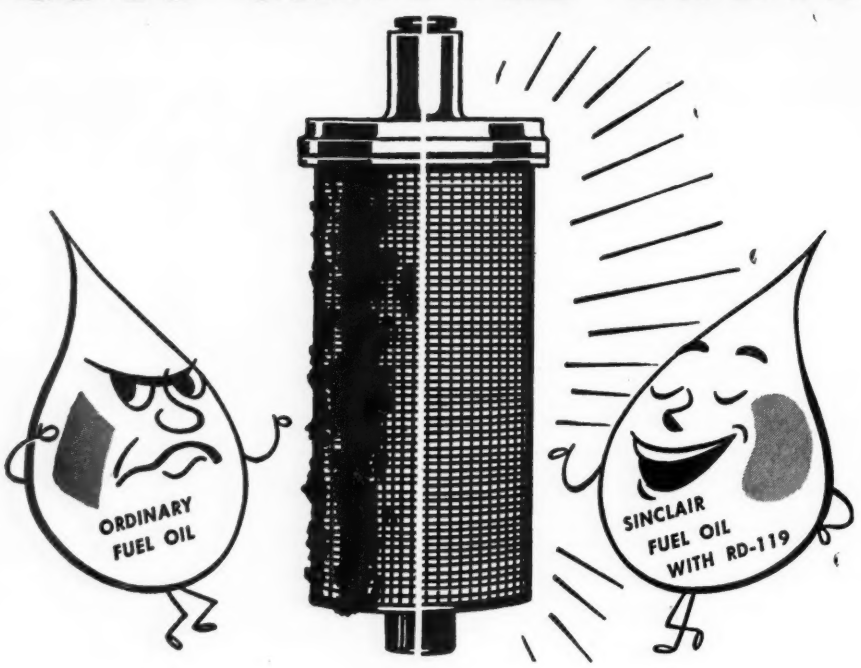
Elected to three-year terms on the Council were:

M. K. Fahnestock, research professor and coordinator of research, Dept. of Mechanical Engineering, Engineering Experiment Station, University of Illinois; Raymond T. Kern, chief engineer, Jennison Co., Fitchburg, Mass.; Peter G. Gordon, vice-president, Wolff & Munier, Inc., New York, N. Y., and D. M. Mills, manager, F. J. Evans Engineering Co., Houston, Tex.

Elected to the committee on research for three years were:

Irwin W. Cotton, president, I. W. Cotton Co., Indianapolis, Ind.; Walter A. Grant, director of research, Carrier Corp., Syracuse, N. Y.; Neil B. Hutcheon, professor of mechanical engineering, University of Saskatchewan, Saskatoon, Can.; Burgess H. Jennings, professor of mechanical engineering and department chairman, Northwestern University, Evanston, Ill. and Charles O. Mackey, professor of heat-power engineering, Cornell University, Ithaca, N. Y.

How Sinclair RD-119 CUTS SERVICE COSTS



RD-119 Stops Rust—Keeps Customers Happy

With ordinary fuel oil, RUST, caused by moisture condensation, clogs filter screens and burner nozzles. This results in customer complaints, increased servicing costs. But Sinclair Fuel Oil contains RD-119®, Sinclair's miracle rust inhibitor. Used regularly, RD-119 stops rust—cuts service-call expense, helps keep your customers happy. Save money, save trouble with . . .

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FUEL OIL WITH RD-119®

ANTI-RUST Super Flame ®

Maryland Association intervenes in rate Hearing

THE OIL HEAT ASSOCIATION of Maryland, Inc., Baltimore 1, Md., has intervened in opposition to the Gas & Electric Company's request for increased rates on steam and electricity. Several other associations, commercial and industrial firms in Baltimore are taking similar action.

OHA maintains that it is discriminatory for the Gas & Electric Co. to allocate its general costs—Federal income taxes, wage increases, materials and equipment required to supply its utility services—to its electric and steam heating services to the exclusion of its gas rates. The Association has petitioned the Public Service Commission along these lines.

Members of the Association operating within the area served by the Gas & Electric Company are being assessed to raise a fund for the battle. It is anticipated there will be no curtailment of the OHA's present Advertising campaign.

ESPA seeks Relief from dwindling gross Profit

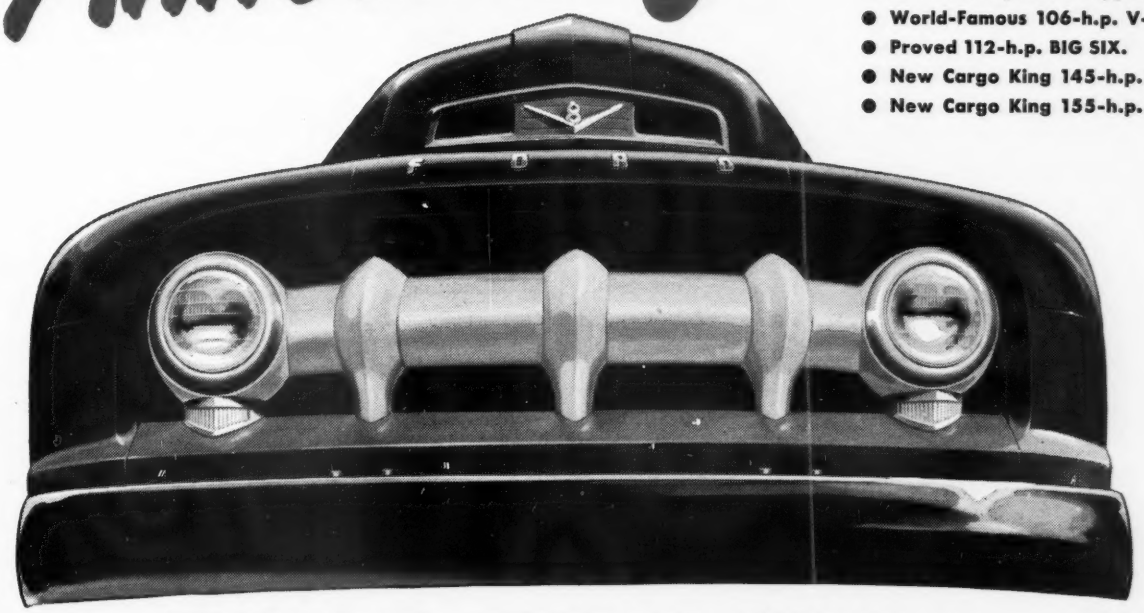
AS A MEANS OF SEEKING RELIEF from declining gross profit caused by inflated costs, the Empire State Petroleum Association, New York 17, N. Y., urged the supplying companies and each member of the association to give immediate consideration to this problem.

"The businesses of many of the petroleum jobbers and distributors have been placed in grave jeopardy," declared the ESPA board of directors, meeting at Rochester, January 24, "because the realities of the problem of inflation have not been adequately recognized by the supplying companies who supply petroleum products in our area."

Announcing

NOW! FIVE GREAT FORD TRUCK ENGINES!

- New 101-h.p. Cost Clipper Six.
- World-Famous 106-h.p. V-8.
- Proved 112-h.p. BIG SIX.
- New Cargo King 145-h.p. V-8.
- New Cargo King 155-h.p. V-8.



New FORD TRUCKS for '52

Engineered for modern, low-cost Speed Hauling

NOW FIVE great Ford Truck engines permit better "tailoring" of truck power to your specific hauling job! Over 275 series power combinations. Only FORD in the low-price field gives you so many power choices, series for series, in ½-ton to 3-ton trucks!

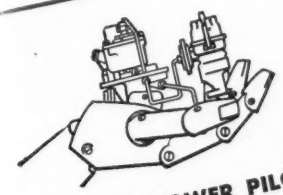
3 NEW ULTRA-MODERN HIGH-COMPRESSION, LOW-FRICTION, OVERHEAD-VALVE ENGINES!

New Ford short-stroke LOW-FRICTION design saves up to 14% on gas! Two V-8's, one Six! Fully-proved! High-compression punch with *regular* gas!

EVERY drop filtered
EVERY time around

NEW FULL-FLOW OIL FILTER

Ford's new Full-Flow oil filter removes harmful dirt and abrasives from *every* drop of oil. Result: engine life is prolonged, ring and cylinder wear reduced.



IMPROVED POWER PILOT

Another Ford exclusive in the low-price field! This proved fuel-feeding and fuel-firing system gives you the most power from the least gas.

Availability of equipment, accessories and trim as illustrated is dependent on material supply conditions.

See "Ford Festival" starring James Melton on NBC-TV

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In another approach to the problem of diminishing gross profit, the ESPA is urging the adoption of a new method of calculating profit on a percentage basis which was discussed by Raymond Kraemer, financial consultant, Mineola, N. Y., in the December issue of the Association's magazine.

Executive group Announced by Wisconsin oil Committee

THE WISCONSIN OIL INDUSTRY INFORMATION COMMITTEE, Milwaukee, Wis., for organizational purposes has divided the 67 counties of Wisconsin into eight regions, each headed by a regional chairman and a number of community chairmen.

Elected state chairman for the group was Don H. Gallagher, vice-president and general manager, Black Eagle Oil Co., Milwaukee 12. Harold M. Mottran, also from Milwaukee, was voted executive secretary-treasurer.

State vice chairman named were: M. G. Peeters, manager, Wadhams Div., Socony-Vacuum Oil Co., Milwaukee (Budget and Finance); James Dornoff, vice-president of sales, Pate Oil Co., Milwaukee 15 (Speakers Bureau); Harry J. Kaufman, manager, Standard Oil Co., Milwaukee 3 (Oil Progress Week) and K. C. King, executive secretary, Wisconsin Petroleum Association, Madison 3 (Oil Progress Week).

Ready convention Plans for New Jersey Group

PLANS FOR THE CONVENTION of Fuel Oil Distributors Association of New Jersey, Newark 2, N. J., to be held on May 1 and 2 at the Berkeley-Carteret Hotel, Asbury Park, N. J., are being formulated.

T. L. Shaffer, vice-president, Congoleum Nairn, Inc., will be the featured speaker at a special luncheon set for May 2.

Fifteen exhibitors have scheduled booths, the convention committee announced.

Macomb Heating Association picks Officers, Directors

THE MACOMB HEATING ASSOCIATION, Fraser, Mich., elected officers and directors at its regular monthly meeting held at the St. John's Parish school, January 29.

W. Arthur Rummel, W. A. Rummel Co., Mount Clemens, Mich., was elected president. Other executive officers named were A. B. Crawford, vice-president; Tex Rickert, secretary and Cliff Stork, treasurer. John Kraft, Sonny Jock, and E. W. Kreider were elected directors.

St. Joseph Oil Men's Club holds its annual Election

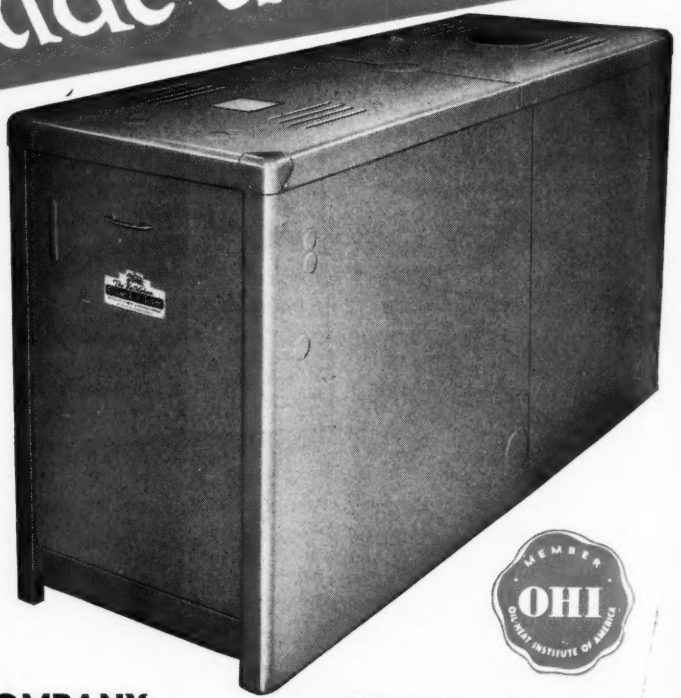
B. J. BROOKS, Brooks Oil Co., St. Joseph, Mo., has been elected president, St. Joseph Oil Men's Club succeeding Jack Allen, Continental Oil Co.

Other officers are C. D. Higby, Socony-Vacuum Oil Co., first vice-president; Lewis W. Hunt, Independent Distributing Co., second vice-president; Jack Zurow, Home Oil & Gas Corp., secretary and C. E. Criswell, Criswell Oil Co., treasurer.

Elected to the board of directors were Jack Allen, G. B. Criswell and J. O. Price.

Here's a "Natural" for SALES and PROFITS!

The Bethlehem Crusade-a-therm



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You can sell
GREATER ECONOMY!

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BETTER PERFORMANCE!

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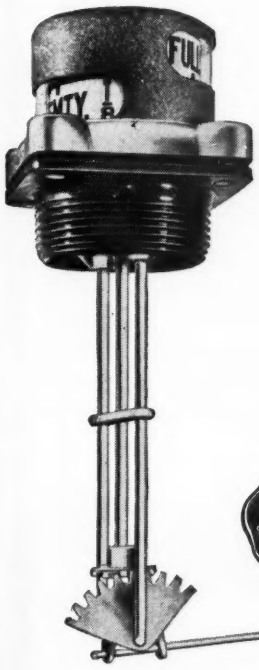
MOST MODERN DESIGN!

You can sell at
COMPETITIVE PRICES!

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA

A few exclusive Bethlehem Crusade-a-therm territory Franchises are still available. Wire or write immediately for full information.



STOP nuisance calls with Rochester "dual-dial" GAUGES

Don't let nuisance calls eat up your time and profits!

You can easily assure years of *trouble-free* service with Rochester DUAL-DIAL Gauges. No fumes can get out to bother your customers. The solid, pressure-tight head construction provides positive *leakproof* protection—even under pressure.

You can make tank checking and filling a snap, too . . . the easy-to-read "dual-dial" can be seen from both front and back.

Featuring permanent magnetic indication, Rochester DUAL-DIALS are Underwriters' listed. More than 2½ million are now in use. They're easy to install and stocked by leading wholesalers everywhere for all standard basement oil burner storage tanks. Rochester Manufacturing Co., Inc., 8 Rockwood Street, Rochester 10, New York.

Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS GAUGES AMMETERS

ROCHESTER DEPENDABLE ACCURACY GAUGES

NOW! SAVE UP TO 25%

on . . . COAL . . . OIL . . . and OTHER TYPES of FUEL with Improved, New

WALKER FUEL-SAVER DRAFT REGULATORS

Over 7 Million Now in Use!

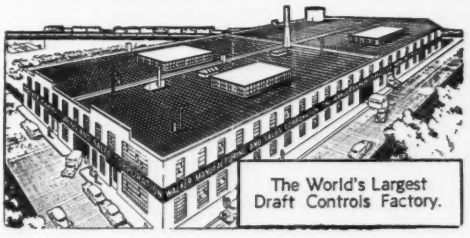
Why not help *your* customers save as much as one-fourth on fuel costs . . . yet enjoy *more* efficient heating performance! Doesn't matter what they burn, either. New, improved Walker Fuel Savers assure maximum combustion with *any* type fuel . . . under *all* stack conditions. This means *even* heating, prevents costly "up the chimney" heat loss. There's a quickly installed, easily adjusted Walker Regulator to fit every make heating unit.

Model BB

Model BB
COMMERCIAL and INDUSTRIAL

(Ball Bearing) Built to meet toughest conditions. Sizes 16-36 inches. Ideal for power plants, schools, garages, industrial plants, laundries . . . thousands in use!

WALKER MFG. & SALES CORP.
1756 PENN ST. ST. JOSEPH, MO.



World's largest factory producing Automatic Draft Regulators exclusively . . . not competing either directly or indirectly with producers of any type heating equipment.

Everyday Snags

Preheat Tank too Cool

"I should have kept my big mouth shut instead of telling my neighbor over the hedge one day that I'd cut his winter water heating costs in half by installing a preheat tank," this oil heating equipment dealer says ruefully.

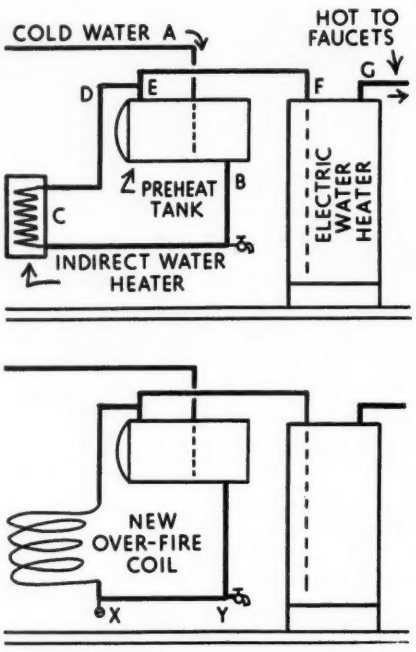
"He had an electric water heater, used loads of hot water, and said that mainly because of the water heater he was running electric bills as high as $25 per month.

"After I put in the preheat tank and an indirect water heater connected to his gravity-circulation hot water heating plant, his electric bills hardly dropped at all."

The upper part of the accompanying diagram shows how the dealer hooked up the preheat tank and tank-type indirect water heater.

"During last January, I found out why. Because he had too much radiation in the house to begin with, and then had put up storm doors and storm windows and had the house fully insulated with rock wool, the temperature of the hot water system that heated the house did not run high enough to heat up the preheat tank.

"Believe it or not, a little 1.25 gph flame in the big, round cast-iron hot water heater boiler carried the heating load beautifully, and the boiler did not get hotter than 125° on mornings when it was zero outside! Most of the time in winter, the boiler temperature seemed to be below 110°. No wonder my new preheat tank stayed cold and didn't save much electricity!

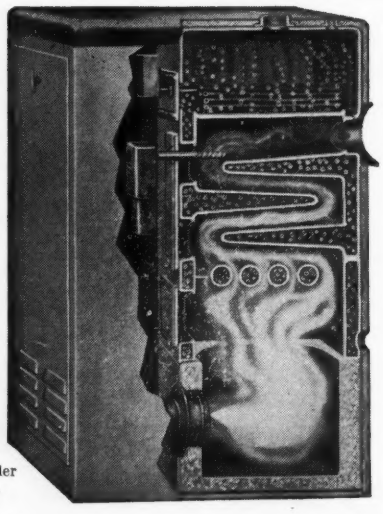


"You can't live next to a man who's got good reason to complain to you every day, so I decided to switch to an arrangement that really would get the preheat tank good and hot in winter. Tearing out the indirect water heater, I put in the most highly effective over-fire coil I could design. This consists of four turns of ¾" copper tubing, as my detail drawing shows, with a refractory over-fire baffle hung over it so that the red-hot products of combustion from the little 1.25 gph flame have to bathe the copper tubing in order to escape from the firebox."

In the drawing that shows the indirect water heater, cold water enters the preheat tank at "A." The preheat tank is warmed by circulation of water along path "B" to "C" to "D." Preheated water goes from "E" to "F,"

Steel HEATING UNIT

5 YEAR GUARANTEE AGAINST LEAKS



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CHAMPION
Sprayon
FREON PROPELLED AEROSOL BOMB PRINCIPLE
Sensational INSTANT PAINT!

COLORS: Chrome Aluminum • Gloss White • Gloss Black • Meadow Green • Bright Red • Medium Gray • Royal Blue • Ivory • Bright Gold • Copperplate • Yellow • Clear Plastic

Plumbing and Heating Contractor's Friend

Used Across America

Excellent for Painting or Touching Up

Radiators	Convectors
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Water Heaters	Fin Pipes
Piping and Cocks	Air Conditioning Equip.
Refrigerators	Oil Burners
Oil Tanks	And 101 other uses

For better work and profit! No mixing, no clean-up, no compressor or hose needed. Just shake the can and paint. All cans furnished with guaranteed non-clogging spray valve. 12 oz. can. Complete your jobs the modern way. Ask your jobber for Sprayon today!

Attention Representatives! Some select territories still open. Write for money making details today!

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F 2526 W. VanBuren Chicago 12, Ill.

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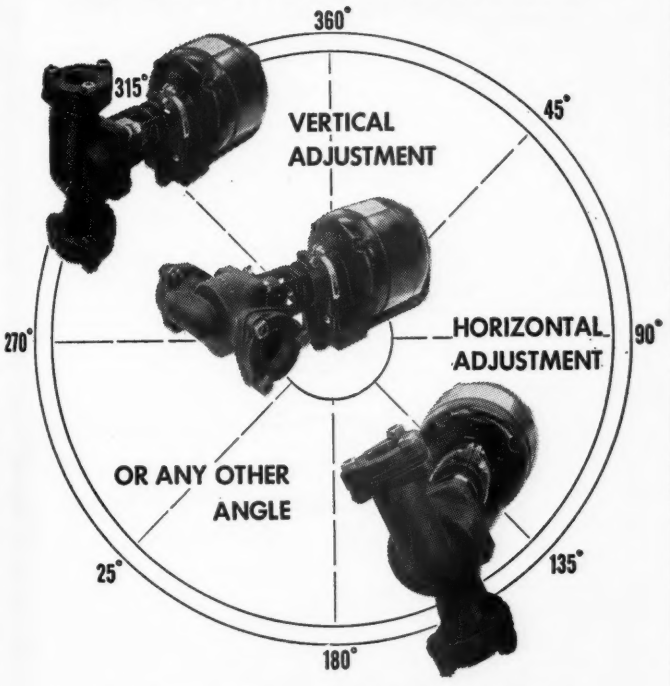

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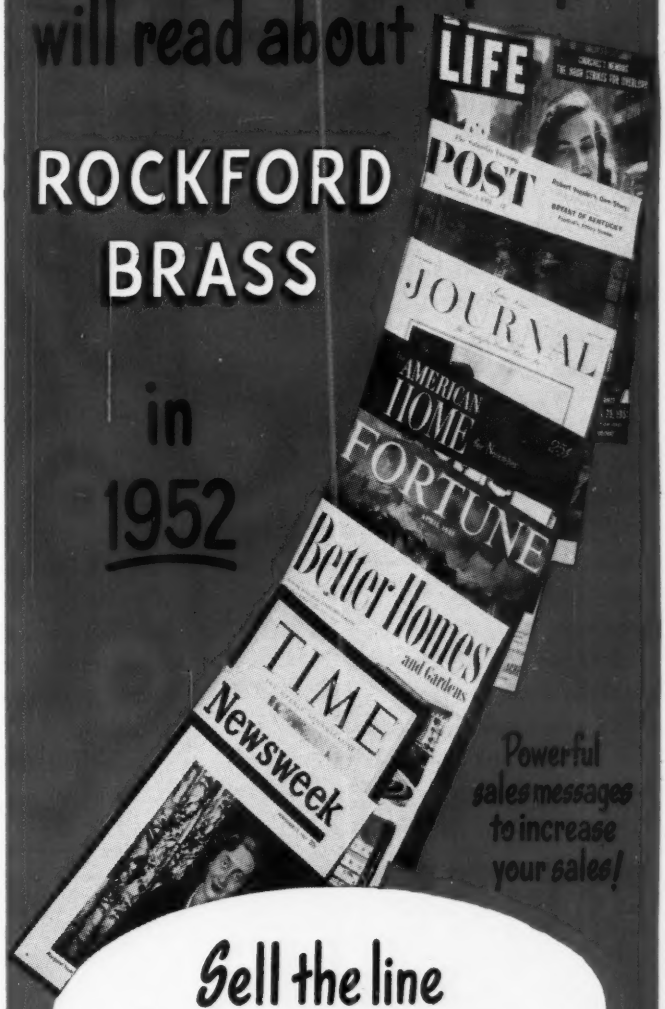

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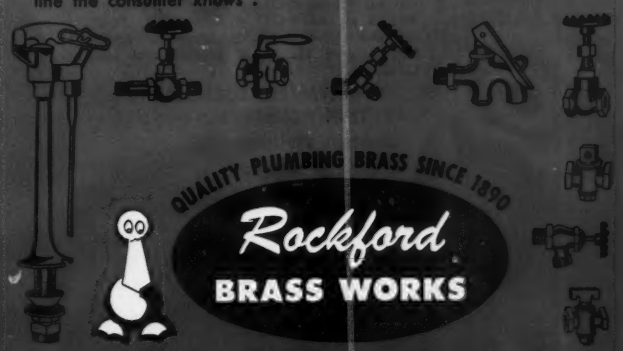


QUALITY PLUMBING BRASS SINCE 1890

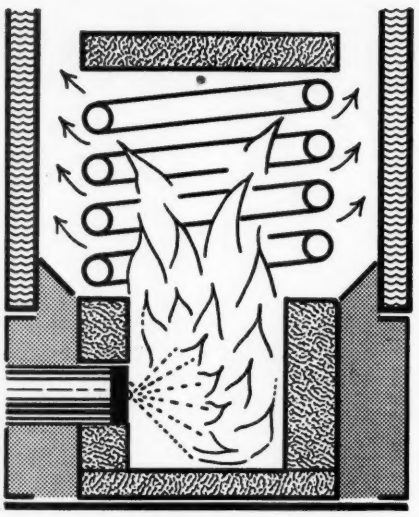
Rockford BRASS WORKS

ROCKFORD • ILLINOIS

entering the cold water connection of the electric water heater. Hot water goes from "G" to the house lines.

To improve the job, the dealer removed the indirect water heater and substituted the highly effective over-fire coil, and lowered the line 18" from "X" to "Y" to insure fast circulation and no tendency for reverse circulation. There are drain cocks at "X" and "Y," used to keep clean this lowest line in the system. The preheat tank is not insulated, thus will pick up some basement heat in summer, and will have less tendency to overheat on coldest mornings in winter than it would if it were insulated. Both the electric water heater and preheat tank have the best obtainable pressure and temperature relief valves, the dealer says. He emphasizes this, for he knows an arrangement of this type can overheat, and that such overheating represents one of the most powerful hazards you can put in a house.

"I unsnagged this job, for I now get the preheat tank up to 140° usually in winter and as hot as 165° on coldest mornings," the dealer winds up his story. "Cost me plenty out of my own pocket to produce the results I rashly promised over the hedge. But I'm more than making good my promise, and I'm getting joy out of it every month now when my neighbor comes runing over to show me his pint-size electric bills. The rig is saving him $100 to $140 a year."



Detail of Over-Fire Coil

Reuniting separated Mercury

Separation of the mercury in a thermometer or a thermostat casing leaves most of us feeling pretty helpless. But, says Robert Soroka, sales engineer for Minneapolis-Honeywell Regulator Co., before you send the thermometer back to the factory, try any or all three of these tricks. Usually, they're effective in reuniting the mercury.

First, tap the case or thermometer in the palm of your hand, bulb down. If this doesn't work, try centrifugal force by attaching a stout string to the thermometer and swinging it in a circle around your head. Finally, there is the refrigeration technique, involving placing the thermometer or thermostat casing in the freezing compartment of a refrigerator where the cold will draw the liquid down into the bulb.

The tricks are most helpful, declares Mr. Soroka, where the mercury is merely separated near the top of the tube. If there's the problem of an air bubble, however, the refrigeration technique usually is the only effective method.

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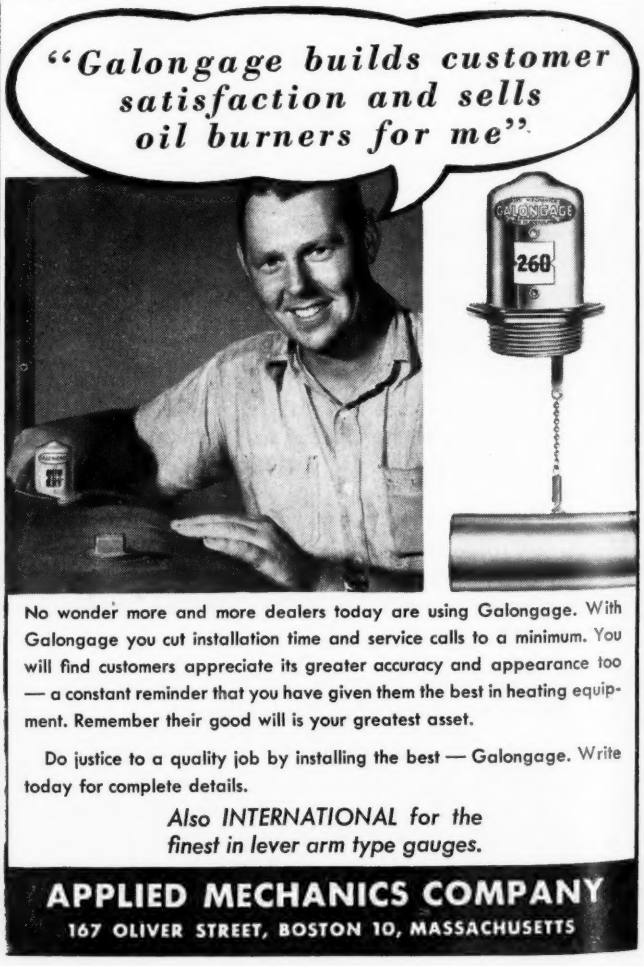
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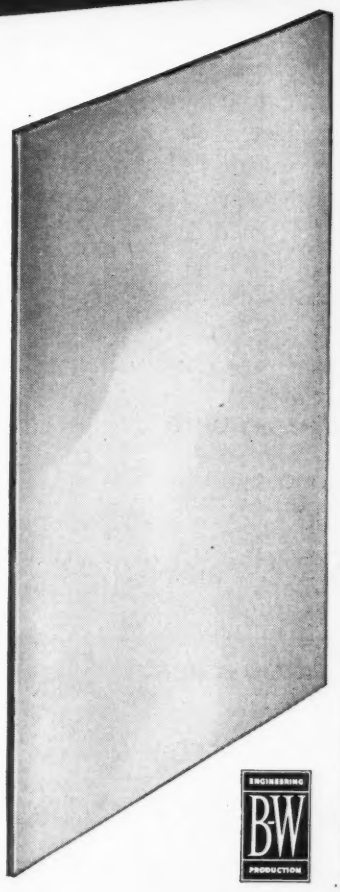

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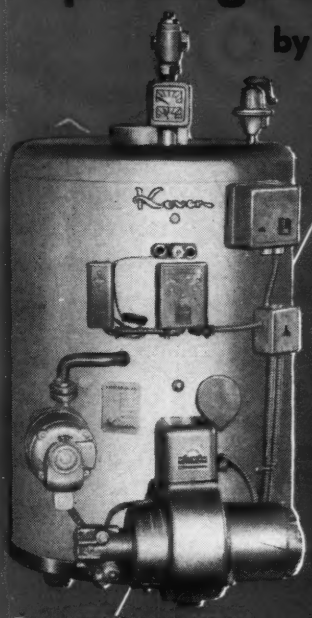

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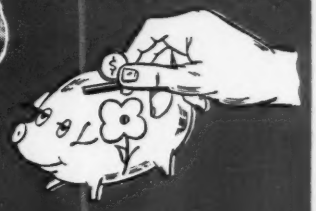

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Fuel bills down—savings up

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COMMERCIAL & INDUSTRIAL oilburning

Design of the industrial Installation

Part VIII—Function and Operation of primary Controls

by
Kalman Steiner*

OILBURNER CONTROLS in general serve three purposes: supervising the igniting of the oil flame when starting and the continuity of the flame when running, for reasons of safety; regulating the automatic starting and stopping of the burner in accordance with load demand; and regulating the firing rate of the burner while running. There is a very close relationship between these functions as a group and that of draft regulation, but the subject of draft control will be considered in a separate article. The oilburner controls to be considered in this series will therefore be classified as safety, operating, and variable fire. However, all three classes are coordinated in a sort of central switchboard called the primary control, and it is to that topic that we first direct our attention.

The primary control is the governing center for the entire oilburner system. It receives signals or impulses from a variety of operating controls, such as thermostats or other temperature controllers, pressure switches, float level regulators and flame detectors, and in turn it sends signals or impulses to the valves and motors that govern the burner output.

The primary control illustrated in Fig. 1 is typical of a group of similar devices. It has three magnetic relays; the first or left hand relay responds to signal from the limit switches (boiler pressure, boiler temperature, boiler water level, for example), room thermostat, or outdoor bulb type of temperature controller. When heat is required, the left hand relay becomes energized and pulls in. In so doing, it closes circuits to start the burner motor and bring on the ignition. It also initiates, but does not complete, a circuit to open the solenoid oil valve. The latter is completed through a timing device. After a period of timed delay, the fuel valve opens, and if the gas flame has already been established in normal manner, the oil is ignited from the gas flame.

The flame sensing device, usually a stackswitch having a bimetal coil inserted into the path of the combustion gases, responding to the change in temperature between the conditions of flame off and flame on, completes a circuit that pulls in the right hand relay. In the energized position, that relay shuts out the safety timer, which started to heat the instant No. 1 relay pulled in, and which if left in that condition for a total of 80 sec. would trip the safety switch to stop the burner. But the pulling in of No. 3 relay indicates ignition of the oil flame has occurred.

After about 120 sec. have elapsed from the moment of starting, the timing device that has already completed the oil valve circuit now closes another contact that pulls in the middle or No. 2 relay, which cuts off the ignition (usually gas valve and ignition transformer). The relay is now in full running position, and will allow the burner to continue until an operating control opens the circuit. Once the primary control is deenergized, for any reason —normal control operation, power failure, or flame failure—the starting circuit is held open until all timing devices have an opportunity to cool off and resume starting condition.

The No. 1 relay can be operated from either a low-voltage or a line-voltage device. If the former, the control switch is placed in the secondary circuit of the transformer that energizes the coil; if the latter, it goes in the primary circuit. Usual practice is to wire the thermostat, when used, in the low-voltage, and a limit control in the line voltage circuit. Where a thermostat is not needed, as in process applications, the low-voltage contacts of the relay are jumped across. Another typical case is to employ a time switch to shunt out the thermostat and low-pressure limit

*C. Hoffberger Co., Baltimore, Md.

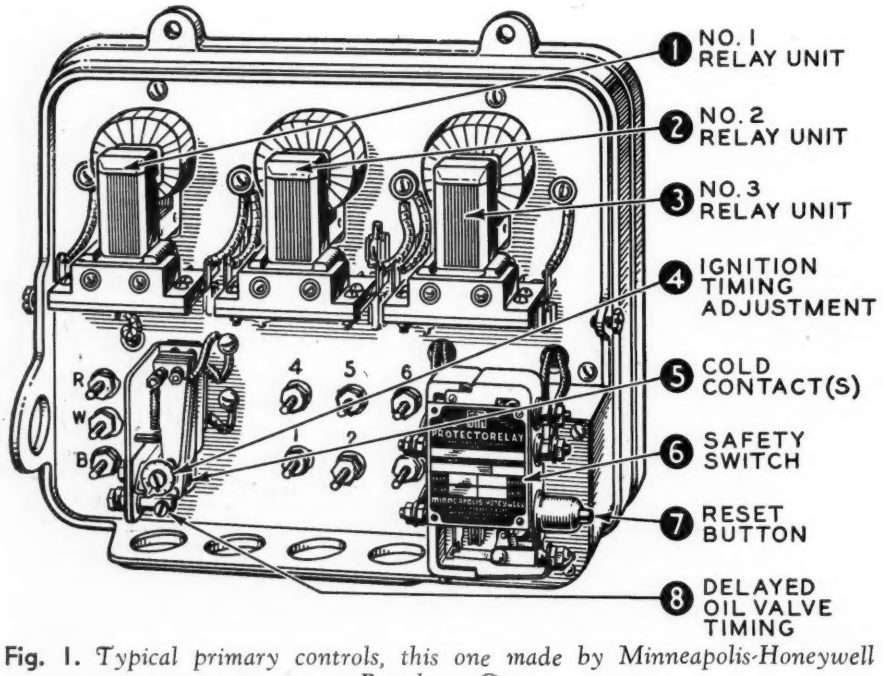
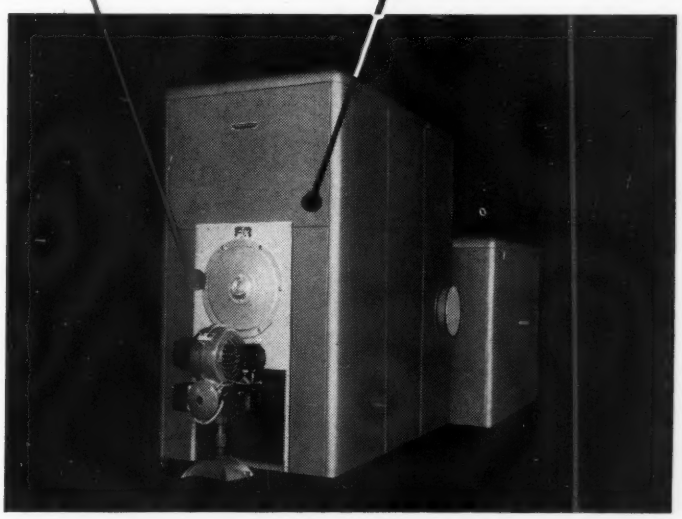


Fig. 1. *Typical primary controls, this one made by Minneapolis-Honeywell Regulator Co.*

industrial heating

industrial ventilation



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WORK WELL DONE SINCE '81

fueloil & oilheat

switch during the day when the boiler carries high pressure, but to place them in circuit during the night and over week-ends, when the burner will be used only for heating the building.

The relay timer switch already referred to as governing the fuel valve opening and the ignition cutoff consists of a warp switch, heat actuated, having a coil against a piece of bimetal. Current starts flowing as soon as the burner starts. After about 30 sec. the bimetal has moved sufficiently to make the first contact, which closes the oil valve circuit. The time needed to close the second contact, which pulls in No. 2 relay to shut off ignition, is adjustable by the turning of a screw that advances or withdraws a contact post.

When using "city" gas, from a utility supply, the cost of the gas is not enough to cause concern about gas consumption. But with bottled gas, often used in isolated buildings, the gas costs considerably more, so the ignition timing may be held to a minimum. Then too, bottled gas has greater tendency to deposit carbon if the air mixture is faulty, another reason for short ignition periods.

Another factor to consider is the grade of oil being burned. No. 4 and No. 5 fueloils ignite easily and the flow is more uniform; once the flame becomes established there is little need to continue the gas flame. But No. 6 oil, especially after a prolonged shutdown, may require a longer period to become smoothly established as to uniform flow and flame stability; hence a longer ignition period is needed.

The internal circuit, as already mentioned, provides for recycling on power failure. With regard to flame failure, there are two styles: recycling and non-recycling. The former, after a flame failure, will make another attempt at starting after the timing devices are back to starting position, and if the normal sequence of ignition, fuel valve opening, and flame establishment occurs, the burner will continue running. The non-recycling type, however, once a flame failure has occurred, will place the system in safety lockout.

Both styles depend upon the cooling of the stackswitch helix after flame failure to open the circuit that drops out No. 3 relay. This stops the burner.

Fireye *electronic primary control, made by Combustion Control Corp.*

Electronic Panels

The system described above will permit the opening of the fuel valve after the period of timed delay, regardless of whether the gas is burning or not. Furthermore, after a flame failure, the stackswitch must cool off in order to stop the burner. Both of those features are overcome in the full electronic system. Electronic networks utilize the conductivity of a gas flame, or its rectifying action on an alternating current, to actuate an amplifier system that in turn controls a flame relay. The flame relay alone can complete the circuit to the fuel valve. Hence, at burner startup, no fuel can enter the firebox unless the gas pilot is burning. After the oil flame becomes established, a photocell takes over the job, permitting the gas flame to shut off. So long as the photo cell "sees" the oil flame, the flame relay remains energized. But the instant the photo cell loses sight of the flame, the relay drops out and shuts off the fuel. Again there can be either a safety lockout or a recycling action, after the flame failure, according to the relay type, but in no event will the fuel valve open again before the gas flame is lit.

In another style of electronic system, the photocell actuates a relay that replaces the stackswitch on the conventional primary control described above. With this hookup, the oil valve will open after the period of timed delay, even though the gas flame is not burning. Should ignition not occur, the relay goes into safety lockout after the usual period of about 80 sec. But should the oil flame become established, the burner continues in operation under supervision of the photocell. Then a momentary flame failure causes instant shutdown, without having to wait for the period otherwise required for the cooling of the stackswitch.

Flame Detectors

The most commonly used type of flame detector used with industrial burners is the stackswitch having a bimetal helix. It is designed for insertion in the circuit of the combus-

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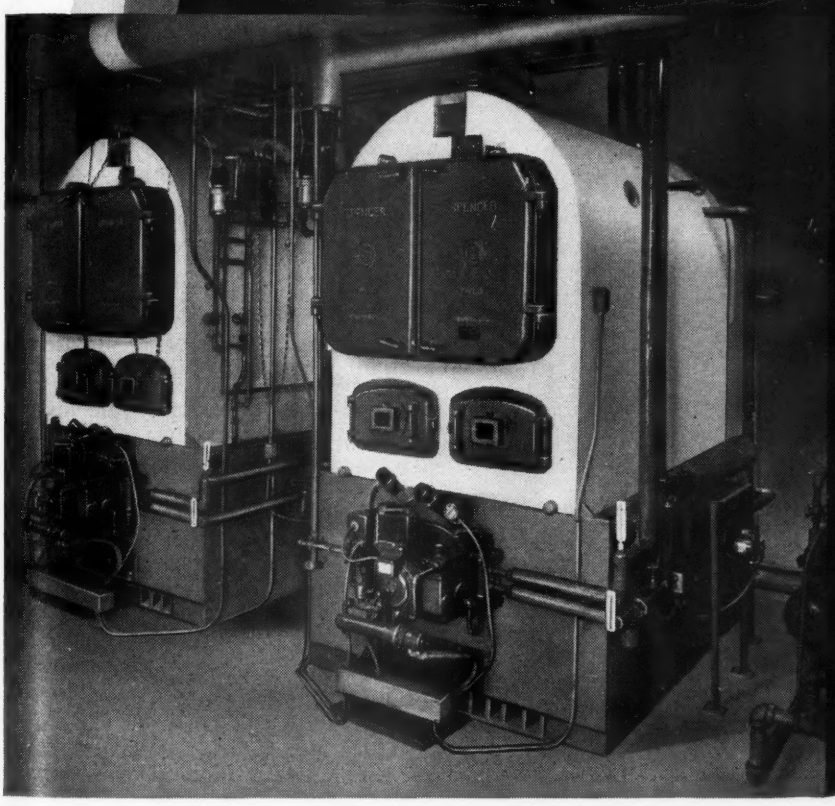

You can select from 76 different models, both cast-iron and steel. Versatile, dependable, every Spencer Boiler is backed by more than sixty years of leadership . . . precision engineered and manufactured to give superior, guaranteed service.

One of the most recent Spencer Boiler installations, providing heat and hot water for the new Ellis Stone Store in Greensboro, N. C. The two heavy-duty Spencer Boilers are equipped with Ray horizontal rotary oil burners, and provision has been made for conversion to natural gas if desired at a later date.

• • •

Heating contractors: Dick & Kirkman, Inc., Greensboro, N. C. Architects and engineers: Voorhees, Foley, Walker, and Smith, New York, N. Y.

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tion gases as they pass through the boiler, but not for direct exposure to the radiant heat of the flame. On the popular compact style of boiler having a rear breeching connection, the stack-switch should be inserted through the front clean-out doors, so as to make contact with the gases as they change direction between the first and second tube passes.

The instrument should have an accessible mounting, with a long flexible lead in greenfield, permitting it to be readily withdrawn from its supporting flange for cleaning. A bit of studying will be needed to determine the correct length of insertion, because of a small aperture in the shank close to the outside end where the switch is located. This opening bypasses a small amount of air, which brings the helix back to starting position rapidly, after the burner shutdown. Too much opening will slow down the switching action at startup, and cause delay in shunting out the safety switch. Too little opening will cause tardy recycling after shutdown and perhaps result in a late start on the next boiler cycle, with consequent loss in boiler pressure.

A stackswitch responds to change in temperature, rather than to actual temperature. Hence there must be provision for back lash in the rotation of the shaft carrying the switch, allowing the helix to uncoil as the fire diminishes under direction of the variable fire, without breaking the circuit.

Another form of bimetal flame detector employs a disc instead of a helix, the disc being intended to pick up radiant heat direct from the flame. Hence the instrument is mounted through the front wall, and sighted directly at the flame. For on-and-off operation this type of flame detector serves very well, but it cannot be applied where variable fire controls govern the firing rate, for any reduction in flame intensity will cause it to open the circuit.

Still another form of bimetal detector has a small coil of very fine bimetal wire housed in a glass bulb, with a small pool of mercury. Like the one just described above, this instrument must be mounted so as to sight the flame. Radiant heat falls upon the bimetal coil, causing it to expand and move its contact into the mercury pool to complete the circuit.

Electronic flame detectors fall into two classes: photocells for monitoring oil flames, and probe rods for checking on gas flames. Both of course must be used in connection with primary panels that incorporate an electronic network. Both connect to amplifier tubes that act as relays to actuate other tubes or relays that will permit a normal burner sequence to occur when the correct impulse is picked up in the firebox.

(Next month's article will conclude the discussion of controls by treating of motor starters, automatic valves, limit controls, and variable fire mechanisms.)

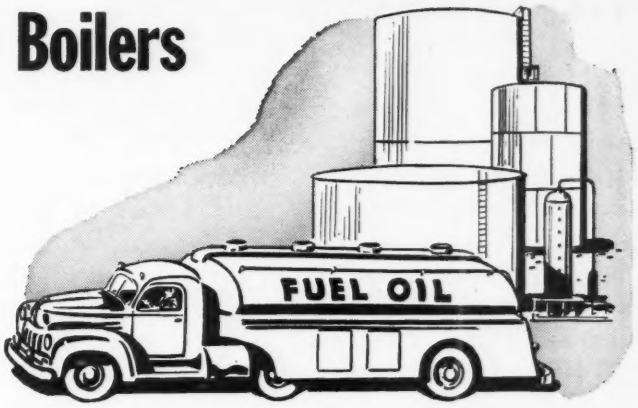
Flame-Otrol *primary control, made by Wheelco Instrument Co.*

Staffco adds six to dealer Organization

SIX DEALERS have been named by Staffco Engineering Co., Chicago, according to Wilbur F. Arnold, recently appointed sales manager. The outlets, who will handle the Staffco horizontal rotary oilburner line, are: Barker Lubin Co., Springfield, Ill.; P. H. Schomers, Plumbing & Heating, Lafayette, Ind.; Virt's Heating Appliance, Fort Wayne, Ind.; Brun's Heating Sales & Service, Evansville, Ind; The Kilby Co., Evanston, Ill. and John P. Johnston, El Segundo, Calif.

You keep main-line efficiency when switching fuels with Smith-Mills Cast Iron Boilers

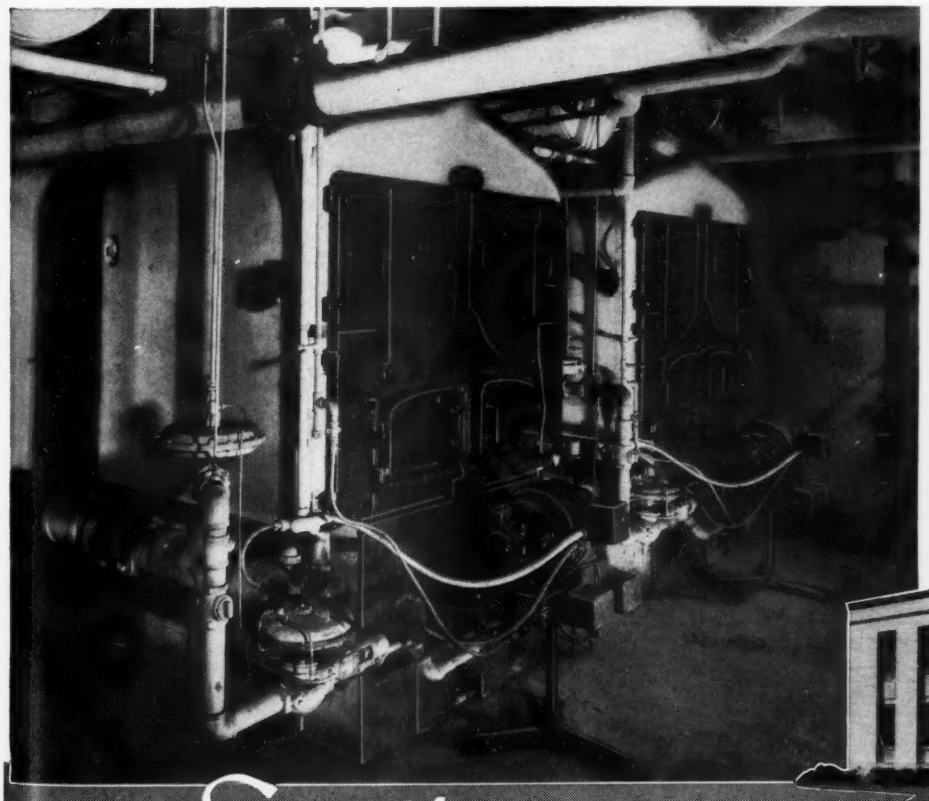
Ideal for installation with combination gas-oil burners



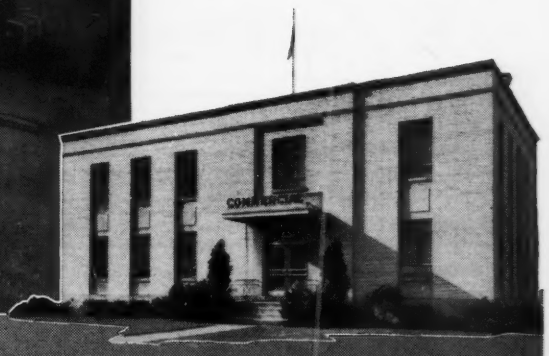
Stand-by service offers very real fuel economy — provided the boiler maintains uniformly high efficiency with either gas or oil. When the call comes to switch fuels there is no change in the demand for constant, uniform heat. A Smith-Mills Cast Iron Boiler responds, maintaining top performance whether the switch is from gas to oil or oil to gas.

This is one of the reasons why Smith-Mills Cast Iron Boilers are "following the pipe lines." Their unique fuel design absorbs heat quickly from any fuel, with low draft loss, and high efficiency. Their smooth, uniform cast iron water tubes resist gas corrosion — are practically self-cleaning.

Now add the other advantages: Over-all savings in initial investment, high heating efficiency with fuel economy, low maintenance cost, installation and expansion without structural changes — *and extra long boiler life* — and you have the perfect combination for your conversion gas-oil sales.



Pictured at the left is the boiler room of the Commercial Motor Freight Terminal in Columbus, Ohio, showing two #440 Mills Boilers. They are now burning gas but can convert to oil in a few minutes should emergencies arise making it necessary to restrict the use of gas. Below is an exterior view of the new Commercial Motor Freight Terminal. Sauer Co., Columbus, Heating Contractors.



H. B. *Smith* CAST IRON BOILERS

THE H. B. SMITH CO., INC., WESTFIELD, MASS. *Established 1853*

COMMERCIAL & INDUSTRIAL oilburning

Over-fire draft Control

"WE'VE GOT A CALL from that big printing plant," the boss told the service man. "The engineer tending the 250 hp horizontal return-tubular boiler complains that instead of hovering half-closed as usual, the automatically controlled smoke outlet damper is stuck wide open. Fix the draft control system and instruct the engineer. He doesn't understand that over-fire draft control system."

"Neither do I, to tell you the truth," the service man admitted. "Why didn't we install a plain barometric swinging-door draft regulator on the smoke breeching of that boiler, in converting that job to oil, instead of all those draft gages and the motor-operated breeching damper?"

The boss took quite a bit of time to explain that a perfect smokepipe draft regulator, of the simple type the service man had in mind, can do no more than keep the smokepipe draft constant. On this big job, such a draft regulator might be set to maintain .10" smokepipe draft, for example. With the smokepipe draft kept at .10", the over-fire draft would vary with the firing rate. The over-fire draft might be as high as .08" to .10" at times of lightest loads and lightest firing, and might drop to .02" or even zero at times of overloads and extremely hard firing.

The draft control system installed on this job is intended to keep constant the over-fire draft, and is set to maintain .03" over-fire draft. An over-fire draft gage serves two functions. First, it shows by its needle if the proper draft is being maintained over-fire. Second, it gives signals to the damper motor that opens and closes the smoke outlet damper, causing this motor to move the damper toward its closed position if the over-fire draft tends to exceed .03", and to move the damper towards its open position if the over-fire draft drops below .03".

The draft gage being extremely sensitive and the big damper being opened and closed by a powerful motor, the result is extremely close control for the over-fire draft.

Two other draft gages are used on this job simply to indicate draft. Unlike the over-fire draft gage, they do no controlling. One merely indicates the draft on the boiler, that is on the boiler's smoke outlet. The other merely indicates the chimney draft, being connected to a point above the smoke outlet damper.

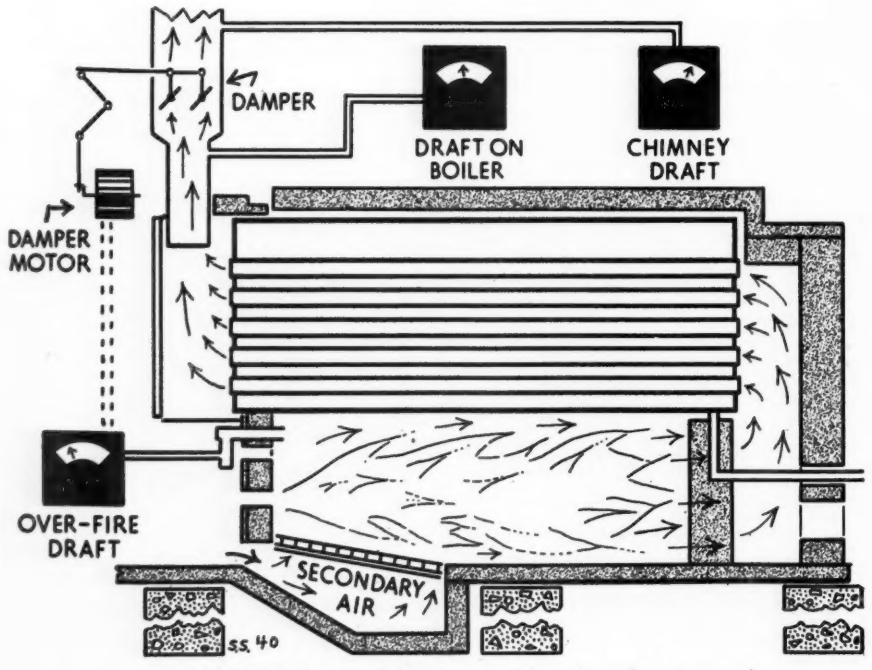
Locating trouble in the draft control system is simplified by reading all three draft gages, the service man's boss pointed out. The over-fire draft is supposed to be .03"; lower draft should cause the breeching damper to open, and higher draft should cause it to close somewhat. The draft on the boiler's smoke outlet must at all times be the value that gives .03" over-fire draft, and is high for heavy loads and low for light loads. Proper performance of the entire system depends, of course, on the chimney's providing greater draft (above the smoke outlet damper) than is needed on the boiler to maintain .03" over-fire draft.

Returning in an hour, the service man announced triumphantly that he'd licked the trouble.

"Like the watch engineer complained," he told his boss, "the smoke damper seemed stuck wide open, instead of hovering in an in-between position. The over-fire draft, sure enough, was below .03" and down to about zero according to the over-fire draft gage. And by adjusting for less than zero over-fire draft, on the plus side that is, I could make the damper motor move the smoke outlet damper open and closed. The system could work the damper. Now the draft on the boiler smoke outlet was only .06", which was too low to produce .03" over-fire draft, of course. I read that .06" on the Draft-on-Boiler draft gage. Jibing with the damper's being wide open, the draft gage hooked up to report total chimney draft also showed .06" stack draft.

"So plainly the system was working all right but the chimney draft was too low to provide proper over-fire draft. You know what the trouble was? I went outside and took a look at the chimney. The big clean-out door at the chimney base was wide open. Closing it shot the chimney draft gage up to .35" and the boiler's smoke outlet draft up to .14". Then the damper started to maintain .03" overfire draft."

fueloil & oil heat
Short Short Article
on Burner Service



HRT Boiler with Over-Fire Draft Control

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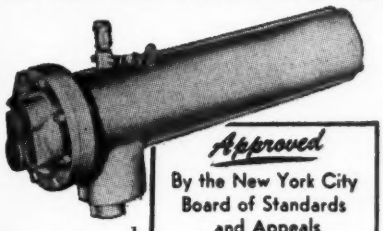
THE *YULA-TROL* RELAY BOX with LIGHTS, ALARM and DETECTOR.

Yula preheaters for fuel oil are designed for greatest efficiency and low cost. Every unit is pre-tested at the factory to insure accurate performance on installation. Yula makes a type for EVERY need!

The YULA-TROL Fuel Oil Detector and the YULA "YT" "U" Tube Fuel Oil Heater, containing an oil de-entrainment chamber and a specially designed probe, is approved by the New York City Board of Standards and Appeals as a complete unit. It also functions as a low water cut-off. The safety device that almost talks! If an oil leak occurs, it shuts off the burner, rings the gong, turns on the red light. This occurs in just 45 seconds after an oil break. It's the ONLY device that gives super safety and top efficiency! Every feature you need for ECONOMICAL oil heating!



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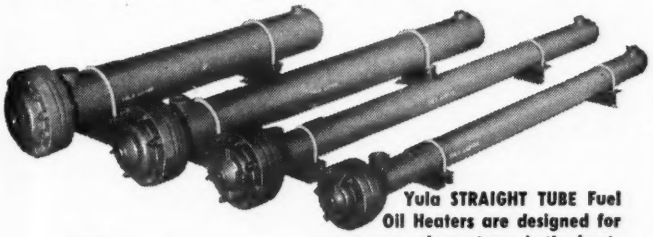
Yula STRAIGHT TUBE FUEL OIL HEATERS

Finest Commercial and A.S.M.E. design—top oil heating.



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A very efficient Conventional oil preheater.

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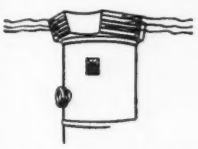

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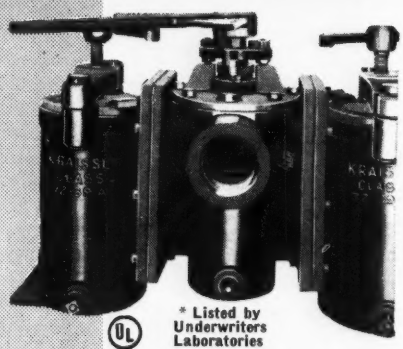

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Kraissl Class 72 duplex separators are designed so that you don't need to use a lifting jack to raise the rotary plug valves. The valves are designed to a sufficiently wide angle taper — so that the plug does not wedge on its seat through wear and use. Grit, scale and extraneous abrasive matter settle on the seat face, from using a lifting jack. Then when the plug is returned to its seat and the valve rotated, the seat is galled and scored. This terminates the serviceable life of your separators — and skyrockets your maintenance and overhaul costs.

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Complete range of sizes — from 1¼" to 6"; pressures to 500 psi. Cast-iron, bronze, steel, stainless-steel, also aluminum, monel or special metals to your specifications.

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Booklet on tubing Failures offered by B & W Subsidiary

A 40-PAGE ILLUSTRATED BOOKLET, published by Tubular Products Div., Babcock & Wilcox Co., Beaver Falls, Penn., discusses the many factors affecting tube life in high-pressure, high-temperature applications.

The booklet records the results of a great number of investigations of failures of carbon steel, intermediate chromium-molybdenum alloy steel and stainless steel tubing in boilers, heaters and heat exchangers during service at elevated temperatures and pressures in the power, oil and chemical processing fields. It displays the history and experience behind the contemporary development of high-temperature tubing and will aid those in the field to obtain optimum failure-free service from their tubing installations.

Copies of the booklet are available without charge. Write, Booklet TR 516, Tubular Products Div., Babcock & Wilcox Co., Beaver Falls, Penn.

❖

New Emerick Book on heating Design, Practice

HEATING DESIGN AND PRACTICE, a book published in October by the McGraw-Hill Book Company, presents the basic theories of steam, hot water and warm-air heating systems and evaluates the performance characteristics of these systems. It fully covers all important new developments in this field, including heat pumps, baseboard radiation and panel heating systems.

Turning to actual case histories, *Heating Design and Practice* analyzes heating for domestic and industrial purposes. It tells how to calculate heating loads, how to arrive at a satisfactory size for the heating component, and points out the advantages and disadvantages to be considered before deciding on a specific installation. Related problems such as the design of fuel handling and storage systems and the combustion characteristics of various fuels, receive detailed treatment.

One of the highlights of this volume is the detailed instruction on how to prepare specifications for a heating system and how to analyze bids. Each topic is accompanied by a series of illustrations and the necessary tabulated data.

The author, Robert H. Emerick, was formerly with the Philadelphia Electric Co., and the Phoenix Engineering Corp. The price of *Heating Design and Practice* is $8.00.

Earl W. Cunningham has been named general manager of the Industrial Heating Dept., General Electric Co., Schenectady, N. Y., and *Harold E. Strang*, general manager of G-E's Measurement and Industrial Products Div. Cunningham has served as acting manager of the Industrial Heating Dept. since April, 1951. Previously, he was an industrial heating specialist in the G-E Detroit, Mich. office, manager of engineering of the department he now heads and assistant to the manager of manufacturing, Controls Division.

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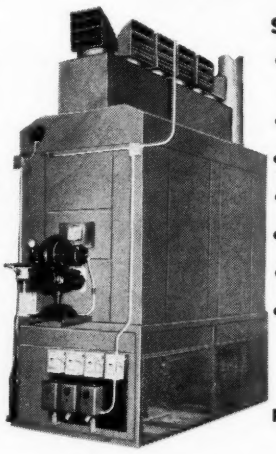
THE MOST MODERN, ECONOMICAL AND FLEXIBLE METHOD OF HEATING LARGE AREAS



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★ Integral adjustable thermostat eliminates wiring problems.
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Permits pumping of oil but closes to prevent syphoning in case of suction line break.

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Valves C5 and C10 are available in ⅜" and ½" sizes.

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Valve A is available in 1¼", 1½" and 2" sizes for 5 or 10-foot head pressures.

You can be sure of the best when you order from Preferred, the oldest and the largest manufacturer of anti-syphon valves.

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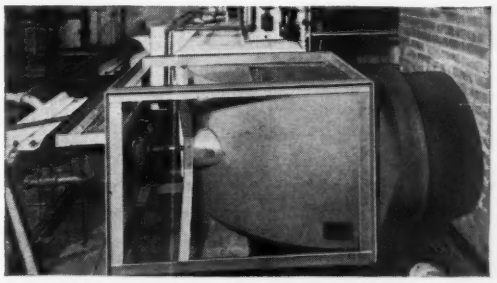

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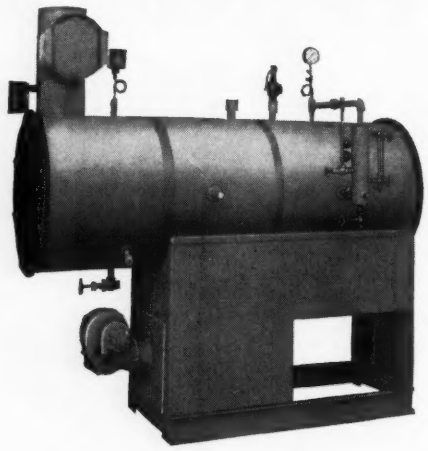

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Young Chicks warmed by Heater and air Diffuser Combination

AMONG THE central heating methods introduced in recent years to replace hovers and open-type stoves in the mass-brooding of chicks and turkey poults, one of the most unique is the combination vertical space heater and adjustable air diffuser. Simple, inexpensive installation and relocation if necessary, less work, full use of space, zone control, no hard-to-remove baked litter and minimum fire hazard are among the advantages of the ceiling suspended unit heater.

The warm air, discharged through the diffuser's single annular air stream, induces the space air to mix with it in the ratio of 7 to 9 parts of space air to one part of supply air, setting up a gentle movement which imparts a "live" quality to the atmosphere. The heated air is directed uniformly throughout the entire area. Thus, fuel is conserved and there is no lag in heat delivery nor override in temperatures. Mortality is reduced because there is no piling or suffocation and there are no hot spots to cause biological reactions which retard growth. Healthy,

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- **is completely "fuel-proof!"**
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Alstrom Feature: Double Transfer protection without sacrificing heating capacity.

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W. A. Matheson wrote this comprehensive book to help those who are breaking into selling and for the improvement of active salesmen. The practical techniques he suggests have been tested and proven by his own experience with them, presented on the basis that everyone can sell if he'll take the trouble to learn.

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vigorous development of the birds is promoted by constant circulation, even temperatures and the absence of drafts and dampness.

Another important feature of these units is their adjustability. For example, when it is desired to provide a 95 degree floor area temperature for starting young chicks, the inner cone of the diffuser is raised to force the air downward, thus creating a virtual hover. As the chicks mature and require more floor space and lower temperatures, the inner cone is lowered and the diffusion area increased until it extends from wall to wall.

A booklet describing this method of brooder house heating may be obtained from W. B. Connor Engineering Corp., Danbury, Conn., manufacturers of adjustable air diffusers.

❖

Heat exchanger Catalog published by Superior

A CATALOG published by Superior Combustion Industries, New York 18, N. Y., describes its heat exchangers in relation to their use for heating, cooling, condensing and evaporating.

No attempt has been made to illustrate the many varieties of industrial heat exchangers because most of them are custom-built. Instead, the catalog presents the basic components, heads, shells and tube bundles, so as to simplify the selection and specification of Superior heat exchangers for any heat transfer application with special emphasis given to tank and fueloil heaters.

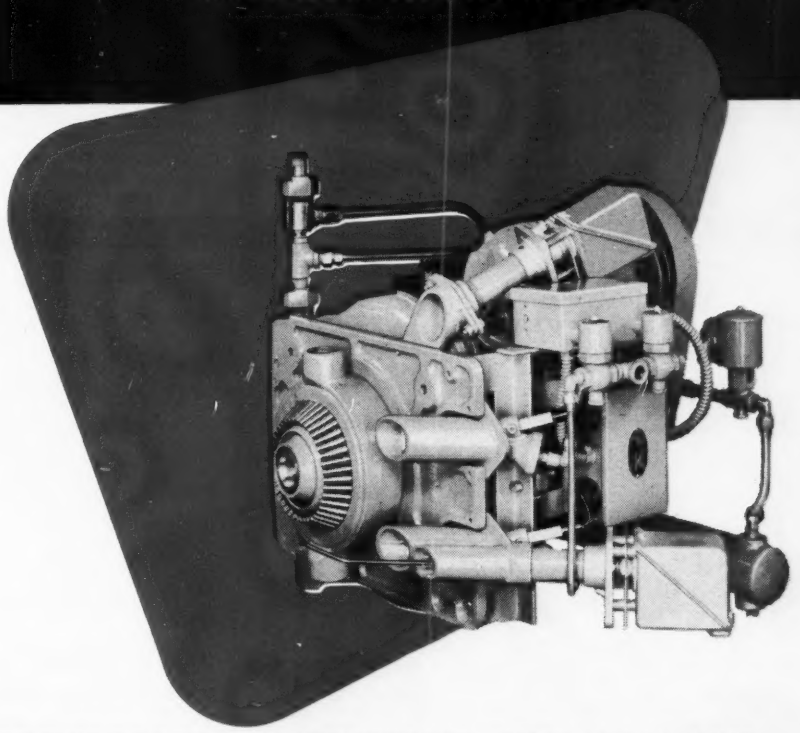
❖

De Laval Co. forms Pacific Coast Subsidiary

THE DE LAVAL STEAM TURBINE CO., Trenton, N. J., announced the formation of a subsidiary company, De Laval Steam Turbine Pacific Co., San Francisco, Calif. G. W. Smith was named chairman of the board, J. P. Steward, president and C. F. Reeves, formerly West Coast manager, vice-president and general manager.

The San Francisco headquarters building maintains warehouse facilities for standardized De Laval products, including centrifugal and IMO rotary pumps.

EVERY ENTERPRISE BURNER INSTALLATION



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There's more to a top-notch burner installation than picking a quality burner of the right size and capacity. This is especially true with industrial and commercial jobs, where there are many variable factors that cannot be standardized. That's why, in addition to producing its complete line of dependable rotary oil and combination burners, *Enterprise* works closely with its distributors and dealers to assure efficient operation of every *Enterprise* burner sold. Complete engineering service covering combustion chamber design, correct piping arrangements and electrical diagrams are available to all distributors to insure the successful installation of *Enterprise* burners. This service is one reason why *Enterprise* burners have won such high favor in the past quarter century.

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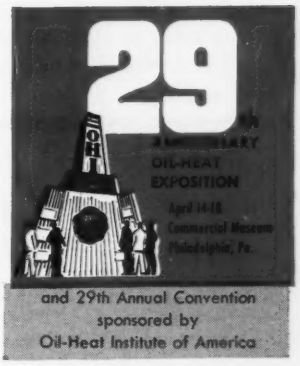
We would like you to visit us at the Oil Heat Exposition BOOTH 162



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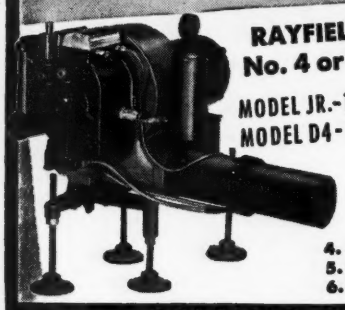

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1. Amazing Economy 12 to 15% CO_2
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Manual on packaged steam Generators published

AN ARCHITECTS' AND ENGINEERS' MANUAL on packaged steam generators has been published by Industrial Div., York-Shipley, Inc., York 4, Pa., manufacturers of Steam-Pak generators and York-Power industrial oilburners.

This 208-page manual contains data required by an architect or engineer for laying out and writing specifications for boiler installations for applications requiring high pressure steam, low pressure steam or hot water.

Also included are color drawings showing applications and hook-ups, as well as installation specifications for Steam-Pak generators. Diagrams are given of the piping requirements and connection sizes of each capacity steam generator. Other features of this manual are electrical wiring diagrams and Steam-Pak output charts.

"IT'S OUR LATEST MODEL—A LOVE SEAT WITH A BUILT-IN TEMPERATURE CONTROL RECORDER!"
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Paraprobe detects Leaks in oil heater Tubes

PARAPROBE fueloil heater and control has been announced by Davis Engineering. Paraprobe safety control is an electrical device that continuously monitors the condition of conductive liquids to detect undesirable contamination and to warn operating personnel of such contaminations. An exploratory electrode or probe imposes fixed low voltage on the liquid stream and if an oil leak occurs the change in electrical conductivity of the contaminated liquid closes the control relay to the alarm circuit.

When used with oil preheaters, a second set of contacts controls the operation of the oilburner and oil pump.

Paraprobe can be used in below-the-water line oil heaters, in which case it

Solve Bulk Tank Preheating!!!
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"Hot-Spot" PREHEATER

Heats liquids in bulk storage to proper flow temperature before they enter the suction line —takes load off suction pumps.
Heating medium — steam or hot water.
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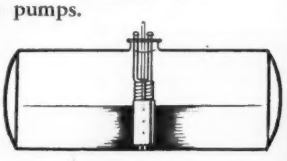

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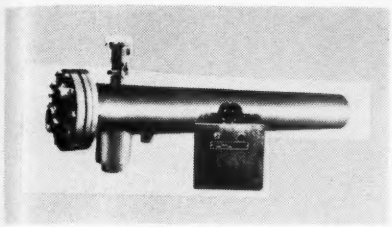


continuously checks the condition of the boiler water as it passes through the heater. With steam heaters it monitors the condition of the condensate. Paraprobe is described in bulletin 60K.

Made by: Davis Engineering Corp., 1064 East Grand St., Elizabeth 4, N. J.

❖

Bristol flow meter Line described in new Bulletin

A 40- PAGE BULLETIN published by The Bristol Co., Waterbury 20, Conn., describes the company's "Series 500" line of flow meters, illustrated with many photographs, charts and sketches.

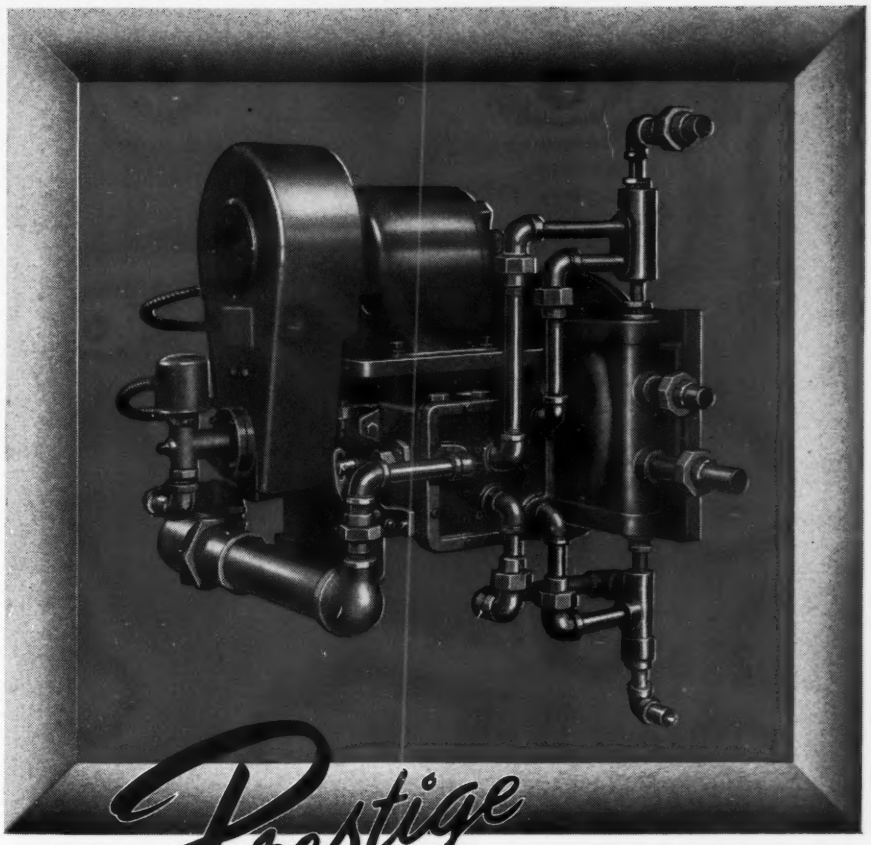
Described are instruments for recording, integrating, indicating, automatic controlling, and telemetering the flow of steam, water, air, gas, oil, solutions and other fluids. Both mechanical and electric type flow meters are shown in a full range of models suitable for a wide variety of uses in industrial plants, utility companies and process control work.

Complete information is given on the various type of meter bodies, operating principles, primary devices for flow measurement, recording charts and accessories. Copies of the bulletin, F1605, are available without charge.

❖

Copes Hi-Lo water Alarm for high pressure Service

COPES Hi-Lo water alarm, which operates on the same thermostatic principle incorporated in Copes feed water regulators, has been designed for high-pressure service. It is dependable at all working steam pressures on both stationary and marine boilers and uses no bellows, diaphragms, floats, weights or differential pressure devices. The alarm has no internal parts and employs a horn as a standard audible signal, lights as a standard visible signal. Any desired audible or visible signal can be furnished. (*Continued next page*)



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- Time-tested horizontal-rotary design.
- V-Belt Drive for the high cup speed essential to efficient atomization.
- Four-Hole Hinge circulates oil through oil heater so that hot oil is on the *pressure* side of the pump, allowing you to burn oil at higher temperatures.
- Adjustable Air Nozzle provides accurate control of flame contour.
- Dual Pumps and Reservoir combined with Constant Oil Rate Control provide controlled firing regardless of viscosity variation.
- Burn any grade of oil. Also available with combined gas burner for any type of gas.
- Fully automatic in sizes to 500 bhp with dual ignition, and hi-low or fully modulating control.

If YOU are interested in the dependable performance that builds prestige *and* profit . . . prestige that builds repeat business on owner satisfaction, lower operating costs, and fewer service calls . . .

If YOU have the experience and know-how which, combined with adequate installation facilities, forms the background of good combustion engineering . . .

This is YOUR opportunity to become associated with one of the most progressive and fastest-growing leaders in the combustion field . . . for Superior Rotary Burners *already have* an established market. They are *now* recognized by the country's leading specifying engineers and consultants as the burners which won industry-wide acceptance for Superior Steam Generators.

You'll see more and more Superior Burners from now on. If YOU want to grow with them, write for the details TODAY.

for performance you can **BANK** *on*

SUPERIOR COMBUSTION INDUSTRIES INC.
TIMES TOWER, TIMES SQUARE, NEW YORK 18, N.Y.

SUPERIOR ROTARY BURNERS

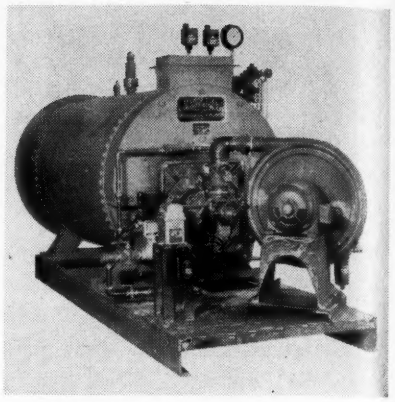
The alarm makes use of three tubes, which are filled with water or steam, depending upon the boiler water level.

Made by: Northern Eqpt. Div., Continental Foundry & Machine Co., Erie, Pa.

❖

McKee horizontal Boilers in Sizes up to 100 hp

MCKEE SUPER-MATIC Scotch Steam-boilerplants are complete units offered in sizes from 12 to 100 hp for pressures up to 100 lbs. psi. The unit is shipped assembled on a structural steel base, with connection to fuel lines, electricity, stack, steam and water piping necessary to put it in operation. Included are burner equipment and electronic flame safety control. Switching from one fuel to another is accomplished by flicking a switch and no stack is needed for operation, but only for carrying flue products to a point of exit.



The Super-Matic consists of a horizontal steel cylinder in which lies a smaller cylinder for the furnace which extends from the front to the rear shell head. Small long tubes from the insulated chamber at the back end of the furnace conduct furnace gases to the flue gas collector.

Made by: Eclipse Fuel Engineering Co., 1100 Buchanan St., Rockford, Ill.

New Customers
New Volume
New "King Size"
Profit

. . . SHOW BIG FUEL OIL USERS (6,000 GALS. OR MORE PER YEAR) HOW TO CUT COSTS AS MUCH AS 20% TO 30% WITH

Cleaver-Brooks

HEV-E-OIL BURNERS

FOR COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL INSTALLATIONS

Because it efficiently uses the heavier, less expensive commercial No. 5 fuel oils instead of the standard light distillate, costing 20% to 30% more, the HEV-E-OIL Burner is a selling "natural" in these days of high and rising costs. Hundreds of highly satisfied owners of HEV-E-OIL Burners report costs cut as much as 20% to 30% in many installations.

BIG PROFIT WITHOUT ADDED OVERHEAD

Why continue to limit your selling effort only in the crowded, highly competitive, light-oil burner markets. Get the "king-size" profits — add volume — new customers by selling the HEV-E-OIL Burner — quality equipment at a quality price — the product of a nationally known manufacturer of oil-combustion equipment. HEV-E features:

- Burns low-cost No. 5 oil
- Automatic all-electric ignition — no expensive gas pilots required
- All air supplied by large forced draft fan
- Low fire starting — safe, smooth ignition
- Full flame modulation — set exactly for size of boiler or furnace
- Automatic pressure lubrication
- High efficiency through accurately measured oil and air flow.

PLANNED PROMOTION MATERIAL

Includes displays, decals, newspaper advertisements, folders, mailing pieces and selling manual.

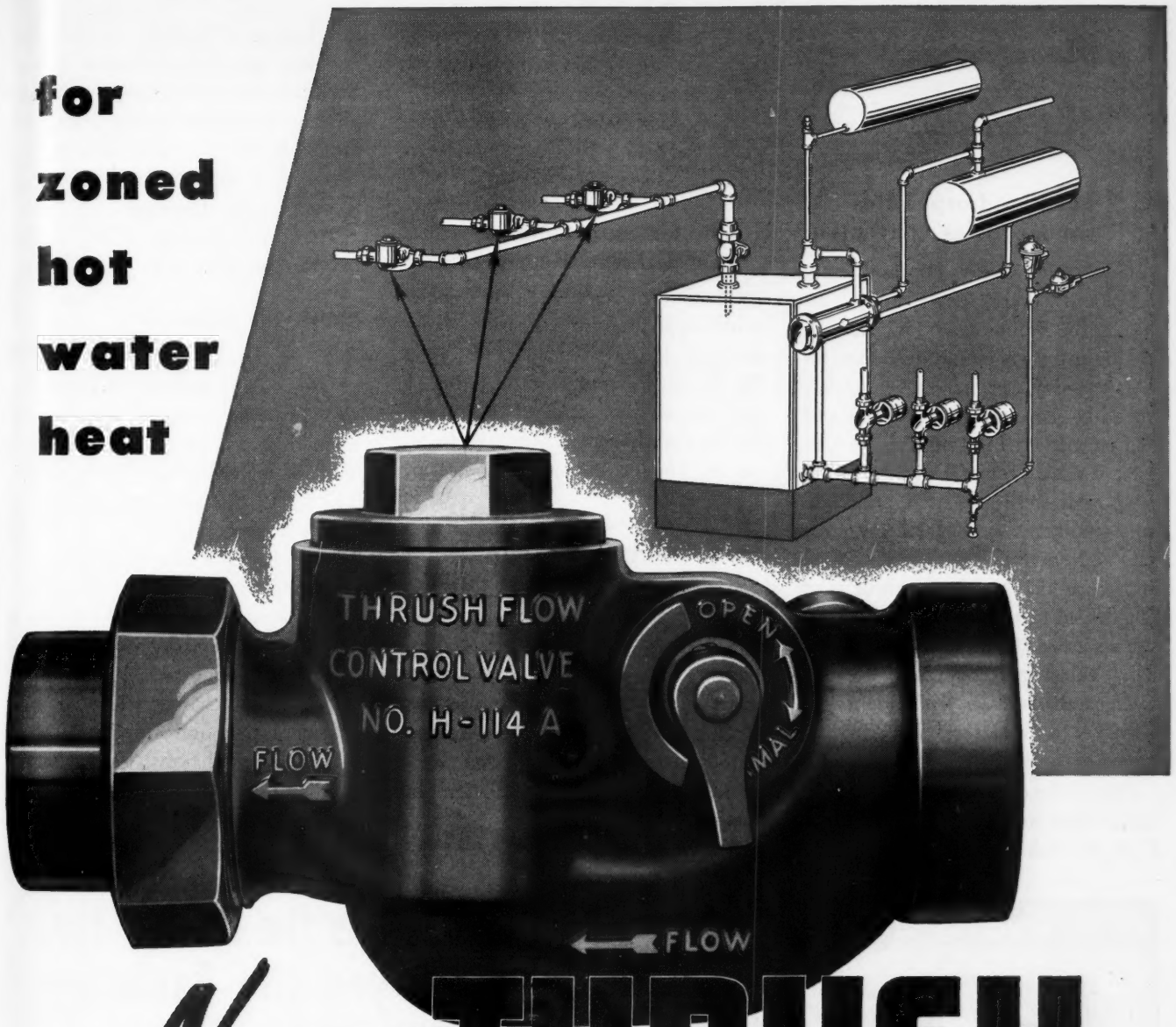
Send for all the facts and figures on HEV-E-OIL Burners — write today.

HEV-E-OIL BURNER DIVISION
CLEAVER-BROOKS COMPANY
Dept. C, 378 E. Keefe Avenue, Milwaukee 12, Wisconsin

SEE US AT BOOTH 909
O.H.I. HEAT EXPOSITION
APRIL 14-18 PHILADELPHIA

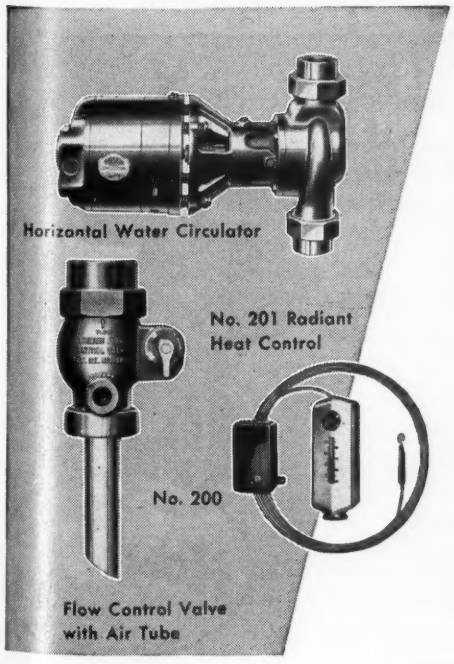
The Danish Government *recently ordered oilfired Thermblocs, direct fired warm air heaters made by the Prat-Daniel Corp., South Norwalk, Conn., to replace pot-bellied stoves, considered too dangerous for their Greenland weather observation station. The equipment was needed for this winter's heating season and parachute delivery was decided upon, since there are no rail lines to Greenland, no truck routes, no airport near the station and a supply ship that makes only annual visits. An 1,800 lb. Thermobloc, packed in a shock-resistant case, was attached to a king-sized parachute and dropped from a plane flying over the station. It floated gently down without damage, was uncrated and in operation within a few hours. The success of the "parachute delivery system" led to orders for five more units.*

for zoned hot water heat



the *New* THRUSH

HORIZONTAL FLOW CONTROL VALVE



HERE'S THE valve you need for zoning hot water heat. Just the thing for low basements. It saves pipe, simplifies installation and gives more head room . . . especially important on long runs. As the illustration shows, this valve feeds straight out from the main and saves several inches of head room over angle type valves. There's a Thrush Flow Control Valve for every need . . . the line is complete with angle and vertical valves, with or without air tube, and the new horizontal space-saving valve announced here. All have the same time-tested operating principle and working parts. For easy zoning of hot water heat and assured customer satisfaction, install the complete forced circulating Thrush Flow Control System. See your wholesaler today or write Department C-3.

H. A. THRUSH AND COMPANY

PERU, INDIANA

Manufacturers' Activities

U. S. Machine Corp. holds two-day Sales convention

U. S. MACHINE CORP., Lebanon, Ind., introduced several new models, including the Winkler L-6 low pressure oil burner for commercial installations, at its two-day national convention attended by more than 700 persons and held recently at Indianapolis

New sales, promotional and advertising tools were presented, and company executives and department heads who addressed the sessions expressed confidence that production and sales would hold to the present high levels. Other speakers included Herman Hickman, Yale University head football coach, Indiana's Governor Henry F. Schricker and Herbert L. Ransdell, mayor of Lebanon.

One of the convention features was a retail sales presentation made by Mrs. Kathryn Graham of Bushnell, Ill., one of 47 trainees who completed Winkler's first sales clinic held exclusively for women last year.

Forty-four Winkler district sales managers held a four-day conference preceding the convention.

Rochester names Metrol as Michigan Representative

METROL CO., Detroit 2, Mich., was recently appointed by Rochester Manufacturing Co., Rochester 10, N. Y., as its Michigan representative for its fueloil tank gauges and test kits. Metrol Co. is already representing Rochester on its line of bi-metallic indicating thermometers.

Sundstrand School help solve fuel Problems

OVER 85 DEALERS AND SERVICE MEN from Rochester, N. Y., attended a meeting conducted by Burdette Douglass, service manager, Sundstrand Fuel Unit Div., Sundstrand Machine Tool Co., Rockford, Ill., to help them solve problems on fuel unit installation and maintenance.

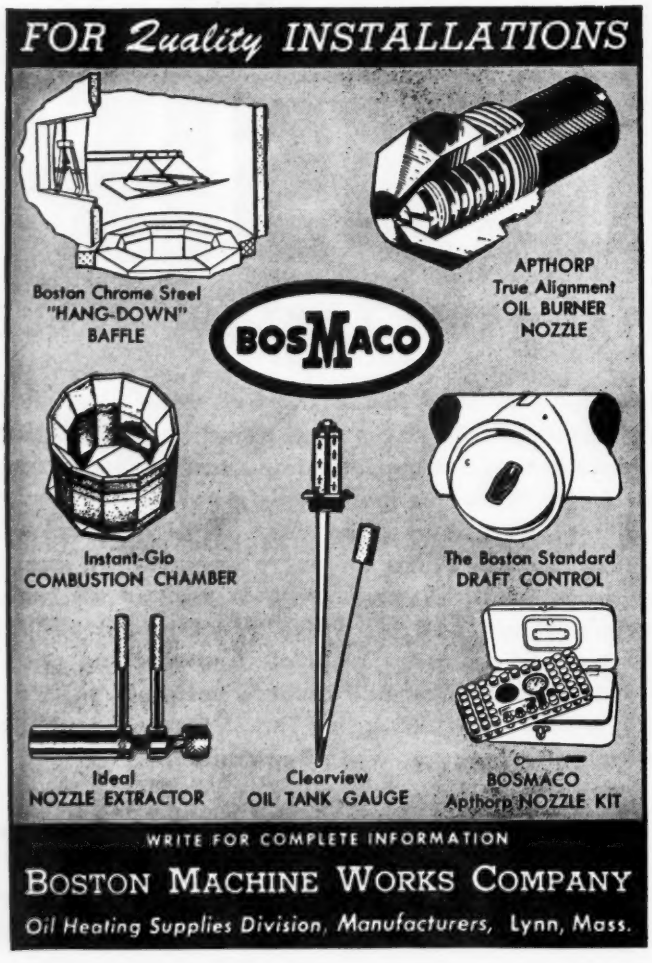
Douglass' talk covered the construction features of Sundstrand fuel units and their uses under various situations. Such subjects as the application of single- and two-stage units, applying different types of valves, determining tubing sizes and lengths, fuel unit adjustments were discussed.

An informal question and answer period took place after the talk.

Sparky is featured in Steinen Catalog

SPARKY, self-christened "World's No. 1 oilburner serviceman," is featured in a small folder, prepared recently by Wm. Steinen Mfg. Co., Newark, N. J. The folder contains excerpts from an article in last July's FUELOIL & OIL HEAT, wherein Sparky extols the use of flame mirrors.

Steinen quotes Sparky's remarks in which he explains how it is possible to check ignition spark, oil spray, nozzle and flame characteristics by using a flame mirror, and supplements them with photographs of its own flame inspection mirror. These show the mirror in its closed and extended positions and the oval and rectangular inter-


FOR Quality INSTALLATIONS
Boston Chrome Steel "HANG-DOWN" BAFFLE
APTHORP True Alignment OIL BURNER NOZZLE
BOSMACO
Instant-Glo COMBUSTION CHAMBER
The Boston Standard DRAFT CONTROL
Ideal NOZZLE EXTRACTOR
Clearview OIL TANK GAUGE
BOSMACO Apthorp NOZZLE KIT
WRITE FOR COMPLETE INFORMATION
BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

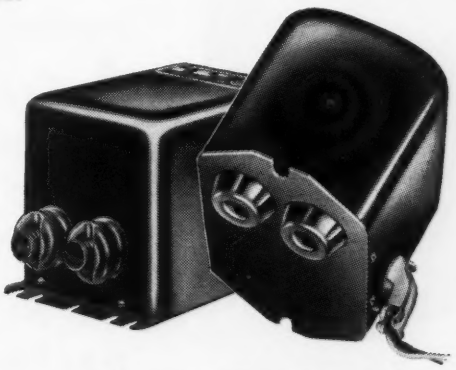
HomEase is the Burner that offers you the Exclusive
FLAME-IZER . . . high CO_2 flame-fitting to the individual fire-box, quickly, easily!
FIRE-STAT . . . more starting air—thus less sooting and smoking on cold starts!
MORE SALES.. GREATER PROFITS easily!
VARIOUS MODELS: .5 to 15 gph
HomEase has an important place in thousands of homes . . . has thousands of satisfied owners . . . it should have an equally important place with you. Get the all-important facts, Now
HomEase Products Company
PATERSON 3, NEW JERSEY
OUR REPRESENTATIVES SEE VOL III THOMAS REGISTER
HOMEASE

There's Real Value in Selecting Top Quality Transformers

Jefferson Ignition Transformers are universally recognized as the ultimate in design and precision construction. Dependable, long-life transformers are of prime importance to the oil burner manufacturer, dealer and service man who values a reputation for quality equipment and workmanship.

The engineering and production know-how of Jefferson has been an important factor in the wide acceptance of oil heating. For over 25 years, Jefferson research, design and manufacturing techniques have produced transformers to make oil heating successful, safe and sure. Jefferson's contributions to the industry have helped to eliminate many of the objections that originally existed . . . Old timers in the business remember the many handicaps—"puff backs", "radio interference", "oil flooded basements", etc.

Working intimately with oil burner engineers since the early days, Jefferson engineers have kept pace with the many and rapid developments of oil heating. Jefferson's traditional and uniform quality standards insure the top performance demanded by users of oil heat.



The name "Jefferson" has always meant the finest in transformers.

JEFFERSON ELECTRIC COMPANY
Bellwood, Illinois
In Canada: *Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.*

JEFFERSON TRANSFORMERS

changeable mirrors than can be affixed to the handle.

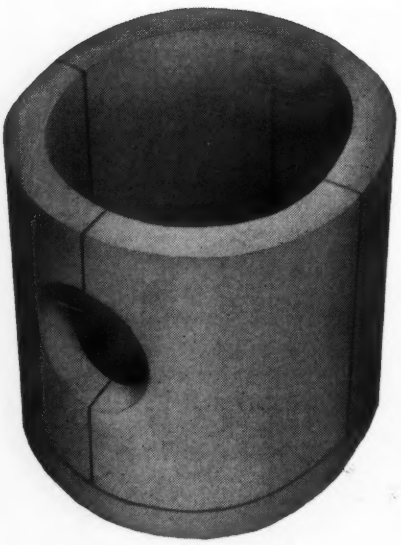
Department and personnel Changes made by G-E Div.

ESTABLISHMENT of a heat pump department and a home heating and cooling department, along with promotions of several men, were announced recently by the General Electric Co., Air Conditioning Div., Bloomfield, N. J.

H. M. Brundage, former head of the year-round air conditioning department, was named general manager of the heat pump department and S. J. Levine, former manager of engineering for the Division, heads the home heating and cooling department. W. L. Knaus has succeeded Levine as manager of engineering and L. E. Thompson has replaced H. B. Donley as manager of marketing. Donley's new duties are those of general manager of the room cooler department, Major Appliance Div.

The organization of the heat pump department as a separate group is in keeping with the growing importance of these units as a product line. F. J. Van Poppelen, general manager of the Air Conditioning Div., said the establishment of the new home heating and cooling department recognizes the fact that products for the home required different treatment from other product lines. Under this arrangement they will have the benefit of special product planning, engineering, manufacturing and sales emphasis. The changes followed a company-wide trend to group like products together.

Do Your PRESENT PRECAST CHAMBERS Give You ALL these Advantages?



1. Low initial cost.
2. Low installation cost — only 5 pieces to assemble.
3. K-factor equal to insulating brick.
4. Excellent performance with either high or low pressure burners.
5. Scientifically packed to prevent breakage.

. . . if the answer is NO -- contact us NOW!

KOLB REFRACTORIES COMPANY Meadow & Jackson Sts. Philadelphia, Penna.

KolbKast Insulated Chambers

H. C. Little adds four Distributors to Staff

FOUR DISTRIBUTORS have been added to the sales staff of the H. C. Little Burner Co., Inc., San Rafael, Calif. In Ohio and Michigan Walter S. Nash, Toledo, Ohio, has been named to oversee sales of Little oilburners and oilburning equipment, with Ray Manning, Seattle 4, Wash., assigned similar duties in the Washington, Alaska territory and Associated Dealers Supply, Salt Lake City, Utah, operating in Utah and Colorado.

The fourth appointment saw W. R. McCurdy, Jr., Rochester, N. Y., assume charge there of a branch office of the company's East Orange, N. J., outlet.

McDonnell Service Manual covers its complete Line

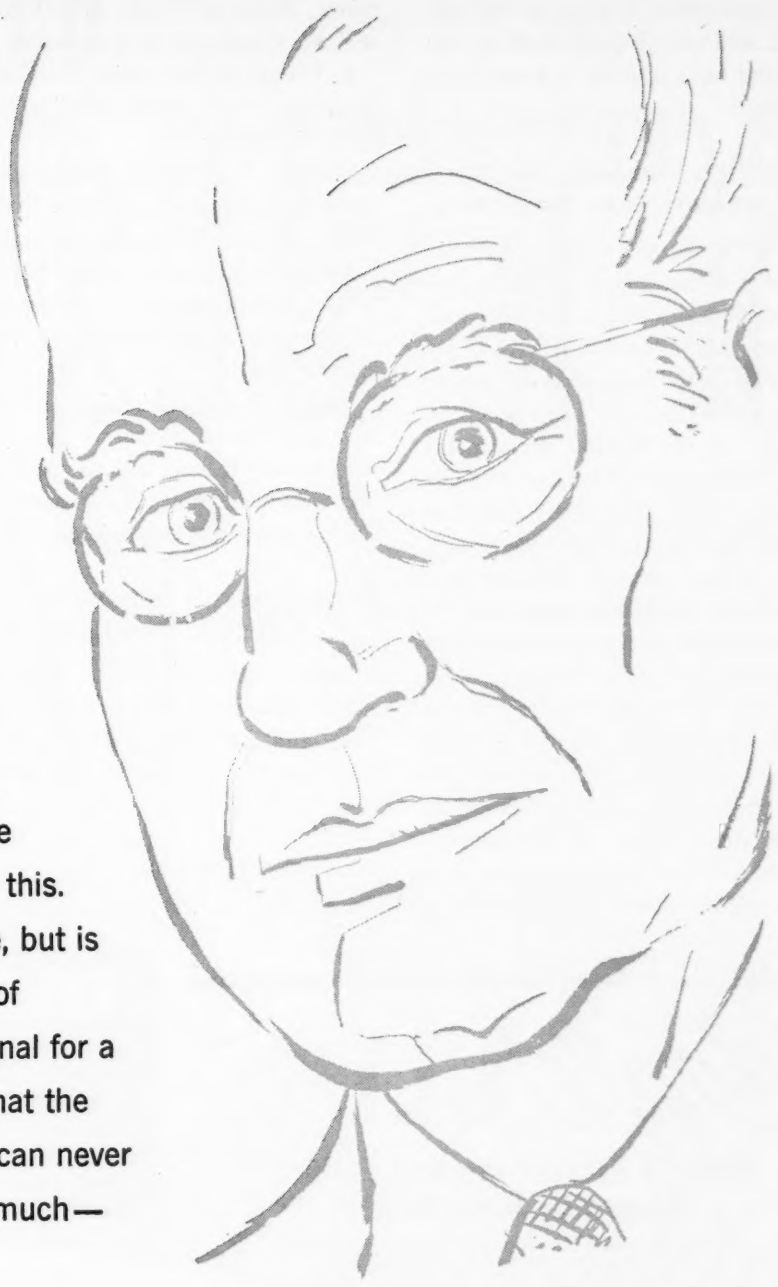
BULLETIN M-37-B, available from McDonnell & Miller, Inc., Chicago 18, Ill., is a Service Manual that includes trouble-shooting details for the variety of water feeders and low water cut-offs that the company offers. It includes a quick reference index by products, listed in numerical order, and shows construction and operating details to facilitate proper servicing.

A great number of labelled photographs and diagrams identify component parts of the units and incorporates information needed for reordering of replacement parts. Service instructions that are shown point out steps to be followed when the boiler is getting too much or too little water, followed by a discussion of common errors made when installing water feeders and low water cut-offs. A com-

..reputation

should be a

reminder..



"We sometimes speak of winning reputation as though that were the final goal. The truth is contrary to this. Reputation is a reward, to be sure, but is really the beginning, not the end of endeavor. It should not be the signal for a let-down, but rather, a reminder that the standards which won recognition can never be lowered. From him who gives much—much is forever after expected."

Alvan Macauley

the standard of the industry...

ABC Oil Burner

ABC OIL BURNERS

AUTOMATIC BURNER CORPORATION

1823 Carroll Avenue • Chicago 12, Illinois

fueloil & oilheat

plete explanation is given of the patented McDonnell quick hook-up for installing units directly in gauge-glass tappings.

Alert Pipe Company holds two-day Show for Dealers

ALERT PIPE AND SUPPLY CO., distributors of plumbing, heating and industrial supplies, located in Bay City and Saginaw, Mich., held its "Festival for Fifty-two" at the Saginaw Auditorium, February 28 and 29. Jerry Johnson, manager of the heating department, explained that the 750 dealers and their personnel who attended the show had secured free tickets from Alert, as a result of five mailings the company made to its 600 dealer accounts.

The exposition type show featured equipment and product displays by more than 35 manufacturers and included a program of nationally-known speakers on timely and practical subjects. Speeches were made by Lorin G. Miller, dean, School of Engineering, Michigan State College and chairman, Technical Education and Codes Committee, National Warm Air Heating and Air Conditioning Association;

L. Glenn Shields, Chief, Bureau of Plumbing and Safety Engineering, City of Detroit;

Herbert C. Angster, National Association of Domestic and Farm Pumping Equipment Manufacturers and

Frank Gall, consultant, Institute of Boiler and Radiator Manufacturers and instructor, I-B-R School of Modern Heating.

The festival was highlighted by favors and entertainments for the ladies who attended, food and refreshments for everyone. Alert also sponsored a similar successful gathering in 1950.

Penn Controls announces Changes in Organization

SEVERAL CHANGES AND APPOINTMENTS have been made in the management and sales organization of Penn Controls, Inc., Goshen, Ind.

R. S. Penn has been appointed vice-president of operations and E. B. Maire has been named vice-president and director of sales. J. M. Reid, controller,

Top: *l. to r.: Penn, Maire, Reid.*
Bottom: *l. to r.: Luscombe, Clark, Cash.*

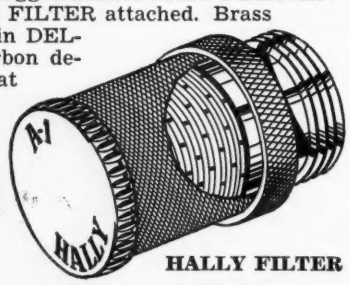
has been made a member of the executive committee. Executive vice-president, M. E. Henning, has resigned.

Continuing as general sales manager and manager of heating and appliance control sales are R. H. Luscombe and R. V. Clark, respectively. K. W. Cash, formerly assistant sales manager, has been named manager of control sales for refrigeration, air conditioning, engines, pumps and air compressors.

Nozzle TIPS

How To Prevent Ignition Failures Caused By Dirty Nozzles

Replace worn or badly clogged nozzles with a DELAVAN NOZZLE—with HALLY FILTER attached. Brass body and nozzle parts in DELAVAN nozzles keep carbon deposits to a minimum at the nozzle and on the stack switch. Positive filtering action of HALLY FILTER stops foreign particles from ever reaching nozzle slots.



HALLY FILTER

"IT PAYS TO USE DELAVAN NOZZLES"

Every DELAVAN nozzle is spray tested under controlled conditions.

Write for condensed Catalog 347C

DELAVAN
MANUFACTURING CO.
3009 SIXTH AVE., DES MOINES 13, IOWA

ENGINEERED FOR YOUR BURNER

ACME ELECTRIC CORP.
503 WATER ST. CUBA, N. Y.

Acme ACME Electric
TRANSFORMERS

SELL GILBARCO

THRIFTY HEAT

FOR BIGGER PROFITS IN '52

FEATURE

SUSPENDED FURNACES

From four-room basementless homes to three-acre factory buildings — Gilbarco Suspended Furnaces are heating them all. The reason? In virtually every type of single-story building — and in many buildings of more than one story — you can install a Gilbarco Oil-Fired Suspended Heating System at lower cost than any other type. And with complete satisfaction to the customer as to heat distribution and fuel consumption.

Here then is the way to handle warm air heating jobs of practically every size, competitively and yet at a handsome profit!

Let us give you literature and details.

Gilbarco

Gilbert & Barker Manufacturing Company
West Springfield, Mass.
Toronto, Canada

Honeywell re-issues Controls Handbook

A RE-ISSUE of its Heating Control Handbook has been announced by the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., bringing up-to-date the original edition and adding current information on later models. The revised book covers a wider range of control applications, prepared to supply the installer and serviceman with suggestions to solve field problems. It is not intended as a complete reference manual, but rather as a practical working guide.

Included are data on oilburner, gasburner and stoker controls, sectionalized by type, each of which can be located by the alphabetical index in the front of the book. The text opens with a series of explanatory definitions and contains a table of the 8 control circuits in common use, which then is followed with detailed descriptions of each.

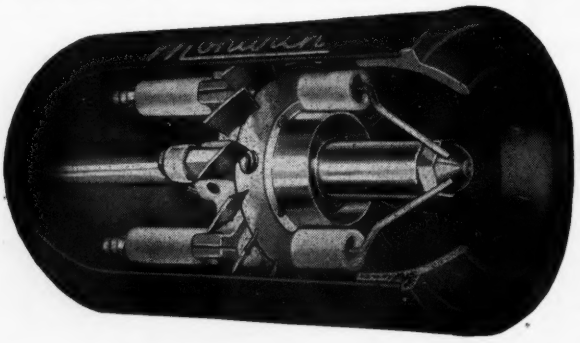
Throughout its 104 pages the handbook spells-out "Do's" and "Don't" for each type of control, incorporates information on proper installation procedures and details correct methods of locating, wiring and calibrating the different models. Wherever it can be done, labelled drawings clearly point out the instructions and directions that are described, with trouble-shooting hints added, in some cases, to complete the discussion.

A 24-page section contains some of the commonly used control systems, arranged to show those applied to oilburners, stokers and gasburners, along with several zoned systems and electronic Moduflow systems. A useful series of tables lists Honeywell controls and corresponding controls that are made by competing control companies.

Copies of the Handbook, designated SA1399-5, are available at a cost of 50¢ each.

.....MONARCH.....

TRY THE G81 COMBUSTION HEAD



- Balanced, clean and efficient fires from .60 to 2.00 gph.
- As easy to install as an ordinary Air Cone and Stabilizer.
- No "adjustments" to tinker with or get out of order.
- Rugged, all metal construction.
- Costs less than any other "Head."

Monarch Nozzles Best-By Fire Test

Having Nozzle trouble? Fires crooked? Lopsided? Streaky? Smoky? Take a tip from Monarch ("R" Series solid or "NS" Hollow Sprays) and see the difference.

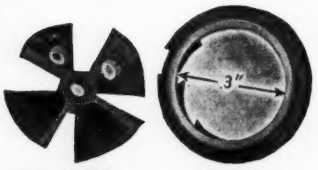
Circular #4150

Circular #12251

Monarch "Anti-Pulsation" Equipment

Want to cure some of those jobs that Rumble, Bump or Pulsate? You can probably do it by installing a recommended Monarch Nozzle, Cone and Stabilizer Combination.

Circular #62250



STABILIZER AIR CONE

Write for Catalog D

MONARCH MFG. WORKS, INC.

2503 E. ONTARIO ST., PHILADELPHIA 34, PENNA.

European Distributor: A. Coutau. Rue de la Scie No. 16. Geneva, Switzerland

Waterman-Waterbury announces new Officers

A NUMBER OF PROMOTIONS were announced by the board of directors, Waterman-Waterbury Co., Minneapolis, Minn., makers of warm air heating equipment.

Harry G. Cross, president since 1946, was named chairman of the board; David E. Sedgwick, vice-president in charge of sales, was appointed president and Ben C. Schwarz, treasurer, is now vice-president and treasurer.

Other appointments made were: Roy L. Lonson, vice-president in charge of production; Ralph W. Neil, vice-president in charge of purchasing; Stuart A. Smith, secretary and John D. Holmgren, comptroller.

Harvey organizes Affiliate; moves New Jersey Store

SID HARVEY of Va., Arlington, Va., the 14th store to be affiliated with Sid Harvey, Inc., Valley Stream, N. Y., opened Feb. 1, 1952.

The new company will be headed by W. C. Archer who has been associated with the parent company since 1934. The manager of the Arlington store will be John Walencis, formerly manager of the chain's Washington outlet.

Sid Harvey of New Jersey has moved to 88 Stuyvesant Ave., Newark, N. J. The new headquarters has doubled the

New 150,000 BTU INPUT High Boys

High input, high quality that get you high-capacity jobs:

Mueller Climatrol

Look at these *Selling Points!*

★ **Compact, space-saving** — Larger sizes are only 27½" wide, 34" deep. Type 214-150 is 67" high; Type 215-150 is 74½" high. Smaller sizes (110,000 Btu) are 24½" wide, 28" deep. Type 214-110 is 66½" high; Type 215-110 is 69¾" high.

★ **150,000 Btu capacity** — also available in 110,000 Btu inputs. Available with either of two efficient Mueller pressure-atomizing oil burners. Type 455 burner (at left) has Mueller's patented firing head.

★ **Convertible**—replacing oil burner with Mueller's efficient gas burner is simple, quick, inexpensive.

★ **Competitively priced** — and Mueller's quality construction makes each a big-value buy.

★ **All-welded heat exchanger** — made of heavy gauge steel. Square wrap-around radiator. Designed to eliminate noise nuisance. Easily cleaned.

★ **Quiet blower** — large 13" size. Motor cushioned on rubber. Adjustable sheave with V-belt drive. Factory assembled, adjusted.

★ **Handsome steel casing** — lined with sound-absorbing heat-reflecting asbestos which is laminated with aluminum foil.

★ **Efficient *up-draft* design** — long flue travel.

★ **Easy servicing** — completely cleanable through removable access panels.

★ **Low-cost installation** — both units shipped assembled; controls on the type 215 are pre-wired.

AGAIN Mueller delivers. Now, in addition to the 110,000 Btu sizes, these popular high boys are available in 150,000 Btu input sizes — for larger homes.

For perimeter heating, slab or crawl space houses, it's the counter-flow, type 215. Its compactness makes it a "natural" for closets and utility rooms. The type 215 is shipped assembled with fan and two limit switches pre-wired into a convenient terminal box.

For conventional installations, it's the type 214. Both are shipped assembled — easy to install, easy to handle (go through most doors).

And *both* types give you all the quality features, the ruggedness, the beauty you expect of Mueller — the things that have made Mueller Climatrol the Big Name in Heating!

Keep the jump on competition—get the facts and figures on these new hi-input high boys. Write: *L. J. Mueller Furnace Co., 2050X W. Oklahoma Ave., Milwaukee 15, Wis.*

D-125

See us at the O·H·I

Mueller Climatrol

FOR GAS • FOR OIL • FOR COAL

space of their old building, bettered parking facilities and has a fully equipped motor shop. The new store will continue to carry a full line of Sid Harvey rebuilt parts.

Anderson Brass Company builds modern Factory

MOUNTING DEMAND for the Anderson Brass Company's line of "Kantleak" filter kits, valves and fittings, has made necessary the erection of a spacious plant at 5303 Twelfth St., Detroit, Mich.

Experienced personnel, working with modern, specially-designed equipment, fabricate the products. Executive and engineering staffs are housed in offices situated across the front of the building.

Armstrong Jobbers hold 3rd annual Meeting

ARMSTRONG FURNACE CO., Columbus, O., held its third annual jobbers' meeting at Columbus, January 11, bringing together heating wholesalers from different parts of the United States.

A morning session was spent at the Armstrong factory and was devoted to a discussion of the effects of new housing design trends on requirements for heating equipment. Later various Armstrong units were shown which were suited for these new trends.

Department heads outlined to the group during an afternoon session their plans and programs for the coming year. A banquet at the Fort Hayes Hotel was held at which time several talks were heard.

Rittling names Mussun Representative in Ohio

THE RITTLING CORP., Buffalo, N. Y., a pioneer in peripheral heating, has appointed The Mussun Equipment Co., Cleveland, O., a recently organized manufacturers' representative firm, to serve contractors and jobbers in northern Ohio.

Wade Manufacturing Co., Elgin, Ill., and Standard Fire Hose Co., Los Angeles, Calif., have also engaged Mussun Equipment to represent them in the northern Ohio territory.

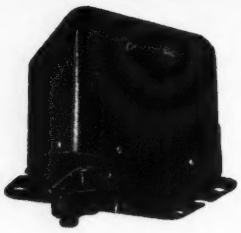
William G. Mussun, Jr., holds memberships in the American Society of Sanitary Engineers and the American Society of Heating and Ventilating Engineers. He is also past president of the Heating, Piping and Heating Contractors Junior Association, past president of the Air Conditioning Association, past member of apprentice board of Heating, Piping and Air Conditioning Contratctors Association, all of Cleveland, O.

Perfection Instructors conduct training Tour

SUPERFEX FURNACE SALES DIV., Perfection Stove Co., Cleveland 4, O., has three touring service instructors, J. N. Johnston, J. J. Madden and H. F. Hange, who will conduct furnace service training meetings with Perfection distributors, dealers, oil companies and gas utilities throughout the United States.

The traveling instructors will cover application, installation and trouble-shooting operations involving Perfection-Superfex oil and gas furnaces. The service instruction meetings with dealers have been scheduled through April.

DONGAN TRANSFORMERS



TROUBLE-FREE SERVICE

Dongan Transformers have long been used on leading makes of oil burners. For long life and dependable service, you can't beat a Dongan! Listed as standard by Underwriters' Laboratories.

Voltages from 5,000 to 20,000.
A variety of sizes and mountings

WRITE FOR Literature

Dongan Electric Manufacturing Co.
2981 Franklin Detroit 7, Mich.
"The Dongan Line Since 1909"

CERAMIC REFRACTORIES

The Gem Clay Forming Company

SEBRING, OHIO

Established 1907

Telephone: SEbring 8-6141

Look how you can profit Two ways when you sell

GENERAL MOTORS
DELCO-HEAT

Delco-Heat Series "F" Burner

In oil-fired heating equipment there is no line more complete than Delco-Heat

Every day, all over the country, homeowners are becoming more enthusiastic about the efficiency, dependability and economy of Delco-Heat oil-fired heating equipment. This enthusiasm produces faith in the dealer who installed the equipment . . . gets him the oil contract almost automatically. Thus he profits in two ways, one—from the selling and installation of high-quality, competitively priced heating equipment, and two—from the added fuel oil sales that follow.

For low-cost conversion sales consider the Delco-Heat Series "F" oil burner. It's the ideal unit for low-cost installation in today's busy market. The "F" burner has the design and high-quality features usually found only in much higher priced de luxe burners.

It will fit any hand-fired boiler or furnace and will heat any average size home. Rated from .75 to 2.75 gph. Standard equipment includes Delco's exclusive Rigidframe Motor for quieter, smoother operation.

Delco Appliance manufactures a complete line of oil-fired burners, boilers and Conditionairs in all price ranges—a line that will increase your heating equipment profits and gain new fuel oil customers. Get the facts about a Delco-Heat franchise in your community today. Send the coupon below for complete information.

CLIP AND MAIL TODAY!

DELCO APPLIANCE DIVISION
General Motors Corp., Dept. FO, Rochester 1, N.Y.
Please send me further information about:
☐ A Delco-Heat Franchise ☐ Oil-Fired Equipment

*Name*_____

*Firm Name*_____

*Street*_____

*City*_____ *Zone*___ *State*_____

For a good deal DEAL WITH DELCO

The line that includes oil and gas burners, oil boilers, oil and gas Conditionair warm air furnaces, oil and gas water heaters, and electric water systems.

Three sizes, OB2-two filter discs — OB4-four filter discs—OB8-eight filter discs. A size for every requirement from the home burner to industrial installations.

GIVE YOUR CUSTOMERS THE BEST—

Refill discs are boxed in a package 1" x 3" x 3" for easy handling and stocking.

Install Sparkler CLEANFLOW fuel oil filters and eliminate all burner trouble due to dirt in the storage tank.

Even micro-size particles are trapped in a Sparkler CLEANFLOW filter so that fuel oil passing through to the nozzle is free from all dirt and moisture that could possibly plug the fine nozzle parts. No by-passing of dirty oil is possible.

Place a trial order of 6 filters today and test this sensational new filter on your own jobs. Write for free bulletin on scientific fuel oil filtration.

SPARKLER MANUFACTURING CO.
Mundelein, Illinois

Makers of fine filtering equipment for industrial use for over a quarter of a century

SPARKLER horizontal plate FILTERS

. . . . Manufacturers' Activities

Folder on Nu-Way Burner designed for the Consumer

A 4-PAGE FOLDER on Nu-Way's model CO-2 oilburner has been prepared by the Nu-Way Corp., Rock Island, Ill., designed for the consumer. It examines the features of the burner and explains in non-technical terms the principles of automatic oil heat.

Nu-Way will honor requests by dealers for supplies of the folder to be distributed to potential customers.

Trailmobile Subsidiary opens Canadian Plant

TRAILMOBILE INC., Cincinnati, O., has announced the opening of a new manufacturing plant by its subsidiary, Trailmobile Canada Ltd., in Scarborough, Ontario, Can., a suburb of Toronto.

The new plant, which is the first Canadian factory to be designed specifically for commercial truck-trailer production, will serve the five Trailmobile factory branches in Canada as well as Trailmobile distributors throughout the Dominion.

Carlton Oil Burner Co. consolidated price List

A CONSOLIDATED PRICE LIST, including information on oilburners, parts, fittings and accessories offered by the Carlton Oil Burner Co., Hartford 1, Conn., has been prepared and is available upon request. Carlton manufactures the Lincoln range oilburner line and acts as distributor for a variety of kindred lines.

Each product is illustrated in the mimeographed booklet and accompanied, where applicable, by dimensional information and other specifications. Trade prices also are shown. These data are reproduced for the Lincoln line, ABC range oilburners and space heaters, Carlin pressure atomizing oilburners, Guardian valves, Firomatic safety devices, Detroit float valves, Autopulse fuel lifters, Walker draft controls and a number of other items. A separate section is devoted to Carlton compression and flared tube and fittings.

Standard of Indiana plans new Pipeline

AS PART of its expansion program to meet military and civilian demand for more and improved petroleum products, Standard Oil Co. (Ind.) has announced plans for a new 316-mile products pipeline from the Sugar Creek, Mo. refinery to Dubuque, Ia. At Dubuque it will join an existing line from Standard's Whiting, Ind., refinery to Moorhead, Minn.

The new pipeline will be of 12-inch

McCORKLE CONTROLS
for Vaporizing Oil Burners
Satisfy dealers . . . Satisfy customers
McCorkle Controls are backed by a record of 18 years of dependable service. Dealers endorse them, because their rugged simple construction reduces service calls to a minimum. Customers appreciate them for their dependable, accurate operation.
Write today for literature and specifications to cover your particular requirements.
D. H. McCORKLE CO.
Box E, Station A • Berkeley, California

another reason—

YOU

can make *more* money with the

YORK-HEAT LINE

This advertisement is currently appearing in magazines of the building industry—offering to builders the famous Levittown boiler unit at a really low price. Sales direct to builders by you—the dealer—will give you added profits.

Get the facts today on York-Heat's franchise

York-Heat distributors are signing dealer franchises NOW! Call him today for complete details or write to Dept. 3, York-Shipley, Inc., York, Pa. for the franchise story.

PROVED IN 11,666 HOMES IN ONE CITY

YORK-HEAT'S famous Levittown Boiler

Available to All Builders For 1952 Construction

York-Heat's production lines are now producing this table-top boiler unit in quantity and all the savings are being passed on to builders who can buy the unit for an amazingly low price.
This is the same basic unit built for 11,666 homes in Levittown, N. Y. and now being installed in 5,000 Levittown, Pa., homes.

$255

(RECOMMENDED BUILDER PRICE)
F.O.B. YORK

Small Size-Large Capacity

FOR RADIANT OR HOT WATER HEAT!

Enclosed in a gleaming white cabinet, York-Heat's Table Topper occupies a space 30" wide by 25" deep and is 36" high. The unit includes the complete boiler unit and provides radiant or hot water heat for 400 sq. ft. of installed radiation. Year-round instantaneous hot water heating is provided at the rate of 3 g.p.m. for a 5-minute draw with a recovery rate of 7 minutes.

This is just one of the more than 60 models of automatic gas or oil-fired boilers, winter air conditioners, or burners built by York-Heat.

Mail this Coupon TODAY FOR MORE DATA

YORK-SHIPLEY, INC.,
YORK 4, PA.

☐ **Please send me more data on the York-Heat Table Topper Boiler.**

☐ Send information on the complete York-Heat line.

I plan to build ..... homes in 1952.

NAME.....

ADDRESS.....

CITY.....STATE.....

YORK HEAT

Automatic heating specialists since 1918

fueloil & oilheat

pipe, traversing northern Missouri and eastern Iowa, and transporting finished product, including kerosene, diesel fuel and furnace oils. Construction is scheduled for the third quarter of 1952, with the line expected to be ready for use early in 1953. Approval of PAD has been secured and priority ratings have been granted.

Minneapolis-Honeywell Div. has new 28-page Catalog

A 28-PAGE CATALOG, No. 5000, describes the principal instruments, control devices and related components manufactured by the Industrial Div., Minneapolis - Honeywell Regulator Co., Philadelphia 44, Pa.

Specifications of approximately 100 measuring and control instruments and valves, with accompanying photographs, are outlined. Included also are several new designs, namely the differential controller and tel-o-set controller family.

Copies of the catalog are available upon request. Address Station 40, Industrial Div., Minneapolis-Honeywell Regulator Co., Philadelphia 44, Pa.

British combustion Team inspects Cities Service Plant

A GROUP OF COMBUSTION SPECIALISTS from England who are visiting America under the auspices of the Anglo-American Council on Productivity and the Mutual Security Agency, made the Cities Service Co., New York, N. Y., one of their first stops.

Walter W. Scheumann, manager of research for Cities Service Research and Development Co., acted as host for the group.

Walter W. Scheumann *(right), manager of research for Cities Service, New York, N. Y., explains the operation of the Cities Service Industrial Heat Prover to a British combustion team who have recently arrived in the United States. Members of this specialist group are (left to right): E. G. Ritchie, W. L. Boon, L. C. Watts and W. S. Hudson.*

Cromwell Catalog shows Forms for fueloil Dealers

A 20-PAGE CATALOG, prepared by Cromwell Printery, Inc., Albany, N. Y., contains information on the line of printed forms offered for the fueloil dealer. One section of the catalog is devoted to the variety of fueloil meter tickets, printed in two colors in either two-part of three-part forms. Standard set consists of a white Print-Thru first sheet, a canary second sheet and card stock for the third copy. In two-part forms, the second copy is on card stock. Fueloil brand or trade-mark cuts are printed in color as part of a standard set.

Other forms shown include a series of blotters to solicit oilburner clean-up jobs, letterheads, invoice forms, window envelopes, business cards, personalized letters, drivers' record forms and folding caution signs. Cromwell also has available facilities for offset printing and complete letterpress service.

KENT
DOUBLE SUCTION
FURNACE CLEANER
solves your toughest problems!

KENT HAS POWER
to do a thorough job as quickly as possible!
KENT FITS THE JOB
has no outside dust-bag, no dirt passes through fans!
KENT IS BUILT TO LAST
minimum time out for repairs assures maximum service!

COMPARE KENT!
It separates into 2 parts for easy carrying . . . has outlet at switch for extension light! See KENT before you buy!

Full Information upon Request

Visit KENT Booth 117, National Oil Heat Exposition, Philadelphia, April 14-18.

CLEAN WITH KENT EQUIPMENT

The KENT Company, Inc. • 434 Canal St. • Rome, N. Y.

PREFERRED
DRAFT-A-JUSTORS
Cut Fuel Consumption by
10% TO 30%

The *Preferred* Draft-A-Juster is the original, patented Draft-A-Juster . . . improved to include the latest in engineering developments.

Stainless steel bearings and weather resistant metals provide long-life service without breakdown due to rust or wear . . . assure *continuous* fuel savings.

Millions now in satisfactory use.

WRITE FOR DESCRIPTIVE LITERATURE AND TRADE PRICES.

SIZES
Stove, domestic and commercial sizes from 4" to 24" in diameter.
Industrial sizes from 2' x 2' to 5' x 12'.

PREFERRED UTILITIES MFG. CORP.
1860 Broadway, New York 23, N. Y. Boston Office: 839 Beacon St.

SAVE THAT EXTRA PIPE

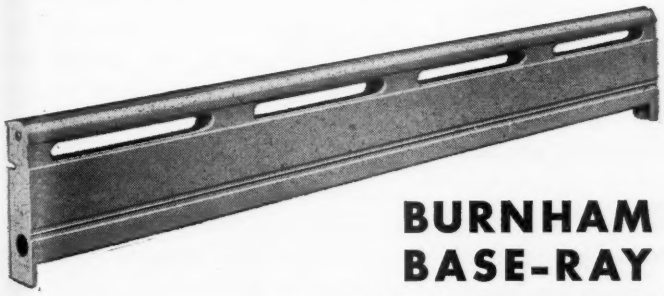
— it's almost enough for your next job!

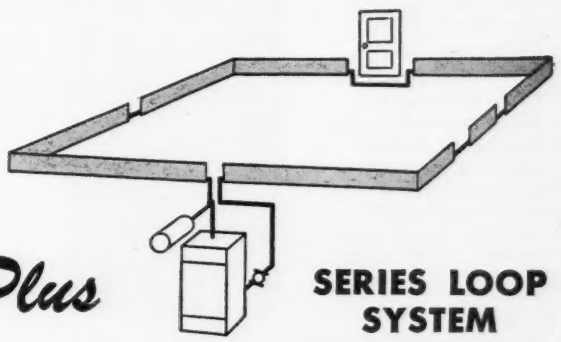
When you can save precious pipe today it's news, and a saving of 40%* is BIG news! Hundreds of Burnham BASE-RAY** Radiant Baseboard installations made with the Series Loop System (see diagram) are what make this big news. Try this hook-up yourself. It will be a surprise for you and for your customers! You'll not only save pipe, but fittings will be *49% less* . . . installation labor *54% less.* And remember... with BASE-RAY you'll be giving your customers the most efficient, space-saving radiant baseboard heating available!

And to assure your customers abundant, low-cost, year 'round domestic hot water, there's nothing like a super-efficient Burnham PACEMAKER *or* YELLO-JACKET *Boiler. Each has built-in copper water heater—tankless or storage type.*

*Compared with conventional one-pipe forced circulation system in a 1-story basementless house. Comparable savings made in other types of houses.

**Reg. U. S. Pat. Off.





BURNHAM BASE-RAY RADIANT BASEBOARD *Plus* **SERIES LOOP SYSTEM**

Women, especially, prefer the low, sweeping lines, and space-saving advantages of BASE-RAY, as well as its clean, even, dust-and-draft-free heat.

The Series Loop System shown here is ideal for ranch type and basementless houses. Can be used with comparable results in 2-story houses with basement. See page 10, IBR Installation Guide No. 5.

BASE-RAY WEARS LIKE IRON . . . FOR IT IS MADE OF IRON

Burnham Radiant Heating Since 1873

Burnham Corporation

FIRST IN THE MANUFACTURE OF BASEBOARD HEATING

BOILER DIVISION . . . IRVINGTON, NEW YORK

BURNHAM CORPORATION, Dept. FO-32
Irvington, N. Y.

Please send me Base-Ray Literature:

☐ New 6 page BASE-RAY folder ☐ BASE-RAY Ratings and Installation Guide

Name .....

Address .....

City ..... State .....

Bettendorf Manual on Installation, Servicing

INSTRUCTIONS for installing and servicing Bettendorf conversion oilburners are contained in a manual prepared by the Bettendorf Oil Burner Co., Marshalltown, Ia. It opens with a discussion of preparations to the heating system that should be made or checked before commencing the installation, including minimum chimney sizes for various burning capacities and gph rates for seven burner models.

Labelled drawings point out components and fittings on each model, with other detailed diagrams included for wiring and piping basement and underground tank jobs. Procedures are enumerated for installing burners in steam and hot water boilers, as well as warm air systems, with a number of dimensional drawings indicating shape and sizes of combustion chambers for different gallonage.

The service section of the manual describes steps to be taken to correct complaints or defects in burner operation, adjusting burners and making a check-up prior to the start of the heating season. Information sheets are included on both Webster and Sundstrand fuel units.

Shafconaire Bulletins discuss engineering Problems

SHAFCONAIRE Engineering Bulletins are being issued monthly by OverHead Heaters, Inc., Detroit 26, Mich., and are available upon request. One of the bulletins discusses how down drafts can be avoided with a Briedert type chimney cap when Shafconaire suspended-type heaters are installed and includes the minimum recommended flue or smoke pipe sizes.

Others have pointed out the importance of oilburner air patterns and their determination with OverHead's air pattern instrument. The November bulletin was a treatise on methods of selecting the proper oilburner nozzle, covering both correct gallonage and types.

Crescent Tool Booklet on using hand Tools

CRESENT TOOL CO., Jamestown, N. Y., is offering copies of a 24-page booklet entitled "How to use hand tools," providing information on their proper use, selection and maintenance. The booklet covers Crescent products, with each individual tool pictured and described separately, the photographs showing how and for what purpose they are to be used.

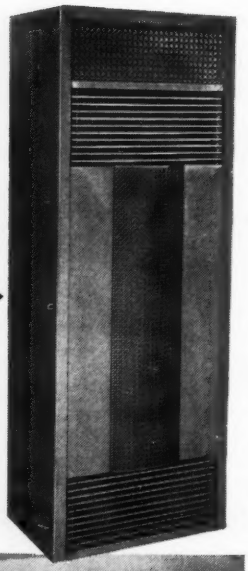
Crescent wrenches, pliers, snips, hacksaws, star drills and screw drivers are among the tools so described, with concluding pages containing pictures of all the tools included in the booklet. These pictures are captioned to identify each tool and include dimensional data and other specifications.

Thermal Insulation covered in revised Infra Booklet

INFRA INSULATION, INC., 10 Murray St., New York, N. Y., has finished its revised and expanded edition of "Simplified Physics of Vapor and Thermal Insulation." Among the subjects discussed in this 56-page booklet are heat and vapor flow, vapor permeability, condensation, conduction and density, convection, radiation and emissivity, reflection and absorption.

exclusive advantages of H.C. Little oil wall furnaces

H. C. Little No. 85 Dual Wall Furnace For partition wall installation, next to chimney or with patent flue. 65,000 BTU per hour heat output.
(Small H. C. Little Dual Wall Furnace available that produces 40,000 BTU per hour.)



Living room view of No. 85 Dual Wall Furnace. Note return-air-intake and warm-air-output grilles, plus radiant panel for extra heat. (Hall side also has large intake and output grilles.)

make them more desirable for heating small homes!

ONLY H. C. Little Oil Wall Furnaces provide such luxurious, fully automatic oil heat at such low cost! Patented low-voltage electric ignitor lights burner . . . thermostat regulates heat. No pilot light to waste fuel . . . no moving parts to wear or make noise . . . no motors, no blowers, no fans of any kind!

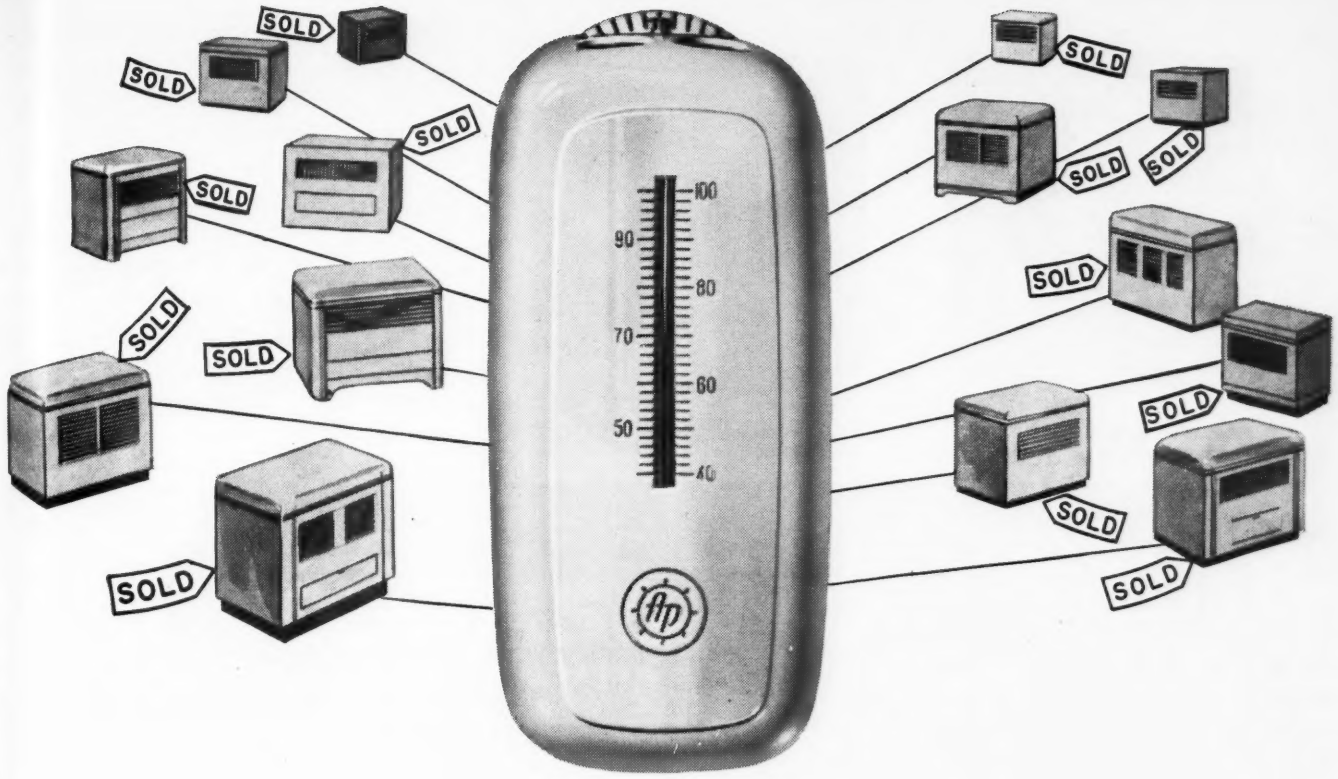
Progressive Low-Temperature Carburetion *(only H. C. Little furnaces have it!)* produces remarkably large heat output—yet leaves no soot or hard carbon deposits!

NOW'S THE TIME TO GET A BIGGER PORTION OF LOCAL HEATING EQUIPMENT SALES — WRITE TODAY FOR INFORMATION ON OUR COMPLETE LINE

H.C. Little Burner Company, Inc.

Head Office: San Rafael, Calif.

Factory Representatives in 16 Principal Cities



Hitch this Automatic Control to every space heater sale for extra profits

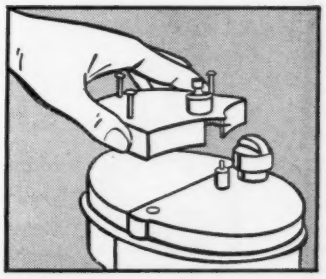
What brand do you sell?

ALLEN'S	INTERNATIONAL
BARNES	JUNGERS
BENNER-NAWMAN	KEMAC *(Canada)*
BEYER	KLEER-KLEEN
COLE HOT BLAST	LACO
COLEMAN	LONERGAN
COLEMAN *(Canada)*	MAGIC CHEF
CREST *(Canada)*	MARCHAND *(Canada)*
CREST-AIRE *(Canada)*	MONARCH
CUSTOM AIRE	MONARCH *(Canada)*
DOMESTIC	MONOGRAM
DRACO FIREBALL	NESCO
DUO-THERM	NORGE HEAT
ENTERPRISE	ORAN
ENTERPRISE*(Canada)*	PERFECTION
ESTATE HEATROLA	PREWAY
EVANS	QUAKER
EVEN-TEMP	QUAKER *(Canada)*
FAWCETT TORRID-OIL*(Canada)*	SAFEWAY
FESS*(Canada)*	SCOTSMAN
FINDLAY *(Canada)*	SIEGLER
FLOOR-O-LATOR	SILENT FLAME
FLORENCE	SUPERFLAME
GILLEN	THARRINGTON
H. C. LITTLE	THERMO-PRODUCTS
HERCO HEAT FLO *(Canada)*	TORRIDAIRE
	VIKIMATIC
	WASHINGTON FRUGAL

Your customers won't be without Automatic Control . . . once you show them

A-P Comfort Control is the easy-selling accessory that makes every space-heater customer a *satisfied* customer. If you sell any of the space heaters on the list at left, you can offer the comfort and convenience of thermostatic heat control, *plus* fuel-saving economies . . . for less than the cost of a subscription to a favorite newspaper.

So easy to install, you can pocket the added profit without the worry of service problems. Start cashing in today with this *Extra-Profit* builder. *Show it . . . and you're sure to sell it.*



Easy to install

Conversion top easily attaches to regularly furnished manual control. Kit furnished complete with thermostat and plug-in transformer. Choose A-P Electric or Mechanical control — for gas or oil-fired heaters. Specifically designed and built to exact space heater requirements.

A-P CONTROLS CORPORATION

(formerly Automatic Products Company)

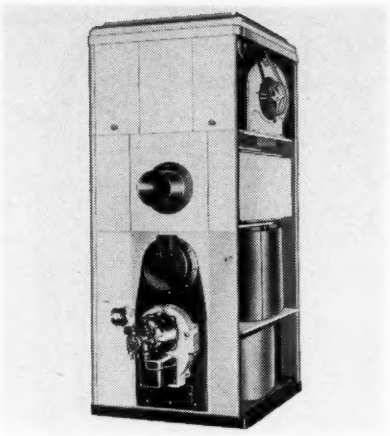
2458 N. 32nd St., Milwaukee 45, Wis. • In Canada: A-P Controls Corp. Ltd., Cooksville, Ont.

New Products

Olsen adds larger Counterflow Furnace

ADDITION of a new model Counterflow furnace, equipped with a plate-mounted gun type oilburner, has been announced by C. A. Olsen Mfg. Co. This model was designed to answer increasing demand for larger capacity units of this type.

Olsen pioneered the development of Counterflow units for perimeter and crawl space heating and boasts a complete line using gun and vaporizing oil-



burners. Units are available up to 115,000 Btu/hr capacity.

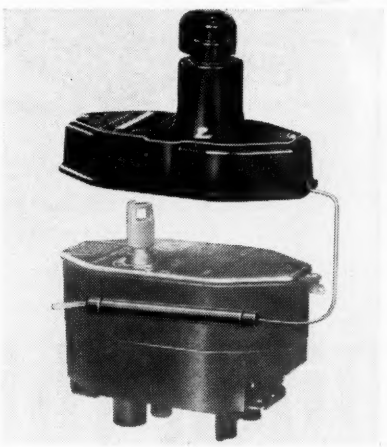
Made by: C. A. Olsen Mfg. Co., Elyria, Ohio.

Detroit Lubricator adds flame modulator Control

CRC-239-MP is a flame modulator thermostatic control, developed by Detroit Lubricator as an add-on control for use on oilburning space heaters equipped with Detroit CRC-239 float valves. The control fully modulates the oilburner flame from high to low in accordance with room temperature demand. The temperature-sensitive bulb usually is installed in a wire clip which is fastened to the valve mounting bosses on the valve proper.

There is no electrical wiring to be done, nor wall thermostat to be installed. The flame modulator may be added by the dealer or installed in the manufacturer's plant. Because the control's action is modulating rather than snap-action, it delivers the proper amount of heat to the room to overcome the heat loss.

Made by: Detroit Lubricator Co., 5900 Trumbull Ave., Detroit 8, Mich.



A "Yes" and 3 "No's"

YES: Sell oil heat *hard* during the closing months of the season

NO: Don't let down on delivery service

NO: Don't let down on burner service

NO: Don't make spot purchases of unproven oils

GULF SOLAR HEAT

Identify yourself actively with Gulf Oil's national reputation for product-reliability and dependable service.

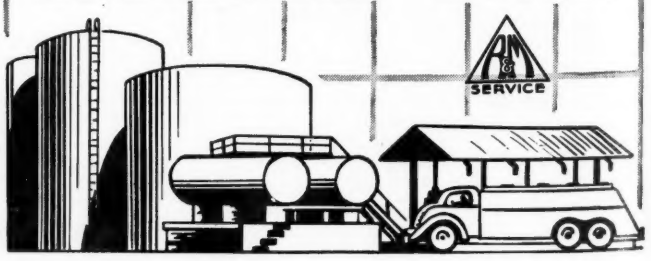
R & M SERVICE BUILDS PROFITS FOR OIL MEN

The *right* equipment in your plant means lower operating cost. You can depend on R & M men, with their intimate knowledge of marketing methods, plus various kinds of equipment, to help you select exactly what is best for your requirements.

RENICK & MAHONEY, INC.

Complete Equipment for the Oil Trade

380 SECOND AVENUE AT 22nd STREET NEW YORK 10, N. Y.



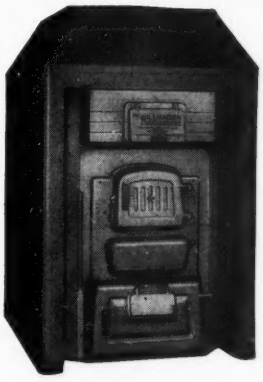
Tripl-ife Flo-Warm Furnace

Gas Forced Air Flo-Warm Furnace

Oil De-luxe Flo-Warm Furnace

THE WILLIAMSON HEATER COMPANY

Complete Line WARM AIR HEATING and WINTER AIR CONDITIONING



Tripl-ife Square Cased Gravity Furnace

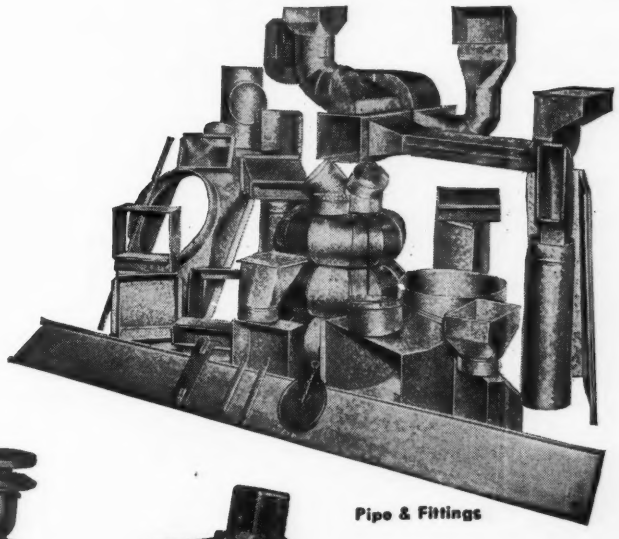
"HEAT TO YOUR HEART'S CONTENT"

Gas, Oil, or Coal—there is a Williamson Warm Air Furnace for any size installation. Beautifully styled, built for life-time service, and designed for fuel economy, the models shown represent 60 years of research—and dealer satisfaction. For greater sales, easier installations, more enthusiastic customers and bigger profits investigate the Williamson Complete Line. Write for details—

THE WILLIAMSON HEATER COMPANY
Dept. FO-3, 4558 Marburg Ave.
Cincinnati 9, Ohio

Tripl-ife Round Cased

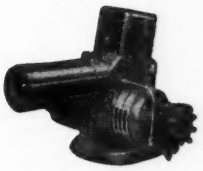
Gas Gravity Furnace



Pipe & Fittings

Oil Hi-Boy Furnace

Gas Burner

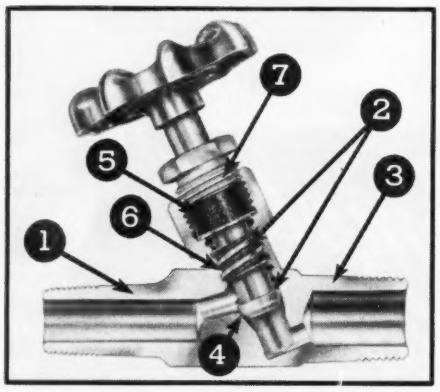


Oil Burner

Stoker

fueloil & oilheat

The INSIDE STORY of *Guardian* SUPERIORITY



No. 1905 Oil Filter Valve made with ½" inlet I.P.T. male threads and ⅜" outlet I.P.T. male threads.

No. 1900 Oil Filter Valve

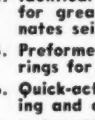
No. 1300 Two Tank Control Valve Assembly

No. 1600 Underground Tank Valve

No. 1400 Globe Valve for Oil, Water or Gas

One valve may look much like another on the outside—but it's what's INSIDE that counts! Every Guardian valve has these features of superiority shown in the cutaway above:

1. Denser, superior graining of extruded brass.
2. Finer machined thread and seating surfaces.
3. Greater wall strength and body strength.
4. Identical brass in stem and seat for greater wear . . . eliminates seizure.
5. Preformed asbestos - graphite rings for packing uniformity.
6. Quick-acting threads for opening and closing.
7. Adjustable packing nut for take-up of packing wear.



No. 1200 Individual Tank Control Valve

Guardian valves are designed for oil line service . . . built with precision . . . tested for uniformity. Look for the name "Guardian" on the valve.

Write for Bulletin V-101.

MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

GUARDIAN QUALITY IS REAL ECONOMY

Guardian PRODUCTS CORP. VALVE DIVISION

Dept. F-32, 1231 E. Second Street

Michigan City, Indiana

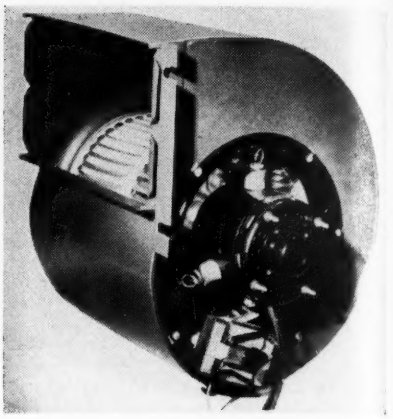
. . . . New Products

International blower Package employs spring Suspension

THE INTERNATIONAL BLOWER PACKAGE is a spring-suspended unit, with the motor floating on springs for silent operation. It has been designed for gravity warm air furnaces up to 80,000 Btu register output and can be furnished in model 600 or model 800, delivering 600 and 800 cfm, respectively, at .2 static pressure. It incorporates a direct-drive motor, eliminating belts or pulleys and is budget-priced for small homes installations.

The package has two 10" x 20" x 1" air filters, an 8¼" by 8¼" blower wheel and a convenient access door on the back of the unit. The cabinet measures 21" wide by 18½" high by 18½" deep; air outlet is 10¾" wide by 6½" high and the air inlet is 18" by 8". The motor may be equipped with speed control as an optional extra.

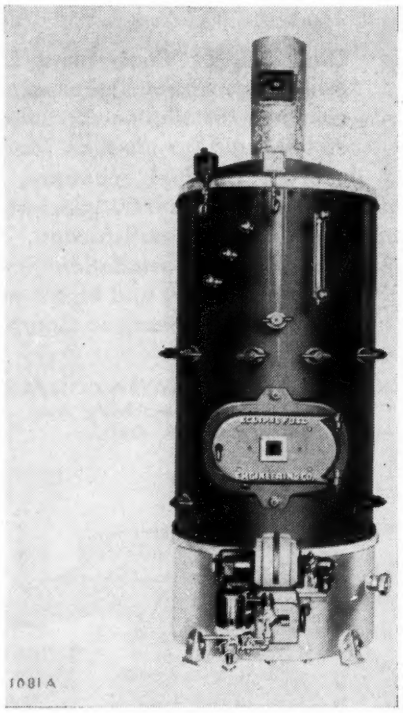
Made by: International Oil Burner Co., Spring and Park Aves., St. Louis, Mo.



Motor-Master protects Autos during cold Weather

MOTOR-MASTER, a device developed by M. H. "Mike" Braden, eliminates cold weather starting trouble for cars or trucks that are parked outdoors or in unheated garages. It is recommended for use by dealers who operate single or fleets of service cars and trucks.

When the temperature of the en-



Type 3A-CGO *Eclipse boiler described in the January issue of* FUELOIL & OIL HEAT. *Through an error the illustration used with the item showed a boiler made by another company. The 3A-CGO, correctly shown above, is an automatic combination gas and oilfired boiler, available in sizes from 3 to 75 hp, pressures up to 250 lbs. psi. The units, which are shipped complete with burner and controls, feature changeover from one fuel to the other by a flick of a switch.*

Made by: Eclipse Fuel Engineering Co., Rockford, Ill.

make a BEE line for the new, NEW

COLUMBIA Boiler Burner Unit

at the

1952 OIL SHOW

April 14 to 18, incl.

Booth 1055, commercial museum, phila., pa.

new low LOW cost..& top performance

here's why TACO CIRCULATORS give more for your money

YOU GET

1. EXTRA CAPACITY

(on smaller sizes)

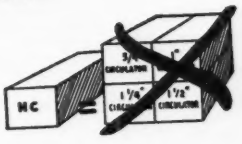
FULL 1½" CAPACITY FOR ALL SIZES { ¾"—1" / 1¼"—1½" }

Taco circulators have that extra capacity needed for today's modern small pipe radiant heating jobs (panels, convectors, radiators or baseboards).

2. LESS AND MORE FLEXIBLE INVENTORY

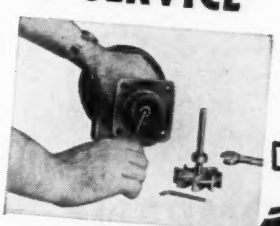
(on popular sizes)

Interchangeable flanges mean one circulator plus four sets of flanges (¾", 1", 1¼" or 1½") equals four sizes of circulators in stock.

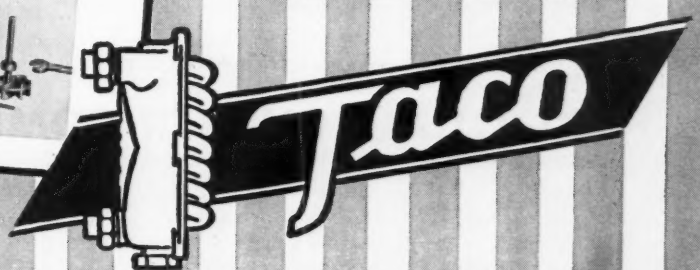


3. A CINCH TO SERVICE

All you need is an open end wrench, screw driver and allen set screw wrench. Taco's carbon seal runs against a stainless steel seal eliminating any wear in bracket.



Better Heating-Better with Taco



TACO HEATERS, Incorporated
137 South Street, Providence 3, R. I.

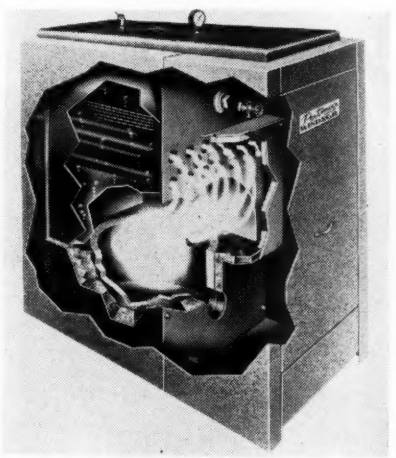
gine drops to a pre-determined level, Motor Master starts it automatically, runs the engine a few minutes until temperature is at a safe level and then shuts it off until a return to low temperature starts the cycle again. In case of mechanical trouble, dead battery, wet wires, faulty coil or spark plugs, the Motor Master's overload switch cuts out the starting action. It is completely electrical, becomes a part of the automobile electrical system and requires no outside wiring. Four models, with adjustable or non-adjustable thermostats, with or without clock-timers, or combinations, are available. It can be used on any internal combustion engine which is in starting condition and has a battery, generator, solenoid starter and voltage regulator.

Other advantages include ability to start the motor automatically when stalled in traffic, key starting and operation only when gear is in neutral position. Models with clock-timers can be used to start the motor at any time, bring it up to running temperature and turn on the heater.

Made by: Fuel Master Corp., Motor Master Div., Toulon, Ill.

Portmar adds Windsor Series to boiler Line

WINDSOR horizontal tube series has been added to the Portmar line. Windsor sizes range from 320 to 3,000 sq. ft. steam, 510 to 4,800 sq. ft. hot water radiation. The boilers operate on low pressure—15 lbs. steam, 30 lbs. water—and feature scientifically arranged



heavy gauge steel boiler tubes, large furnace volume, long gas travel for complete absorption of gases and large hot water tankless copper coil.

Each Windsor boiler is tested with high hydrostatic pressure and is designed so that parts are easy to reach for cleaning or servicing. Simplicity of installation and trouble-free operation are cited as features.

Made by: Portmar Boiler Co., Inc., 193 Seventh St., Brooklyn 15, N. Y.

De Laval announces IMO Pump for higher Pressures

THE DE LAVAL IMO PUMP is designed to handle a wide variety of oil handling applications for pressures up to 275 psi. This rotary positive displacement pump offers all the advantages of the IMO design. It has only three moving parts. It can be used for capacities to 80 gpm, pressures to 275 psi and intermittent pressures up to 325 psi. This new IMO handles light or viscous fluids in hydraulic systems, rotary and steam atomizing oilburners, lubrication, governing systems and similar services.

Made by: De Laval Steam Turbine Co., Trenton 2, N. J.

"NEWTYPE"

STYLE R-43, PATENTED CONSTRUCTION

FUEL OIL HOSE

Here are the reasons why "NEWTYPE" is the *profitable hose for fuel oil service:*

KINK-PROOF, NON-FLATTENING CONSTRUCTION, on or off the reel.

FULL-CAPACITY FLOW from truck to nozzle, regardless of sharp bends in the hose.

LIGHT WEIGHT AND EXTREME FLEXIBILITY—easy to carry out and re-reel.

EXCEPTIONAL STRENGTH AND DURABILITY, with a tough, wear-resistant brown cover—assurance of longer service, lower replacement cost.

Play safe—put "NEWTYPE" Hose on your trucks, now, and make sure of the *profitable advantages* its use insures.

PARTICIPATING IN THE MANAGEMENT AND FINANCING OF KENTUCKY SYNTHETIC RUBBER CORPORATION

CONTACT OUR NEAREST BRANCH FOR COMPLETE INFORMATION

GOODALL RUBBER COMPANY

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.

Branches: Philadelphia · New York · Boston · Pittsburgh · Chicago · Detroit · St. Paul · Los Angeles San Francisco · Seattle · Portland · Salt Lake City · Denver · Houston · Distributors in Other Principal Cities

Est. 1870

Shell Fuel Oil with FOA-5X

...brings praise from dealers and consumers alike:

DEALER

DAVIS & WILLIAMS
2200 Genesee Street
Utica, New York

Shell Oil Company
1066 Madison Ave.
Albany, N. Y.

June 26, 1951

Gentlemen:

Our service forces are now in the process of inspecting our customers' heating plants after the completion of the heating season. This is an annual practice of ours in preparation for the next heating season.

The remarkable thing about our experience this year is that an inspection of over fifty consumer accounts to date has not disclosed a single clogged filter or screen in the fuel system. We thought this to be so remarkable that you deserve congratulations from the oil heating firms for such a product as Shell Fuel Oil with FOA-5X.

Very truly yours,
DAVIS AND WILLIAMS

Glen Davis

CONSUMER

Shell Oil Company, Inc.
54 Riverside Avenue
Rensselaer, New York

June 2, 1951
15 Ayre Drive
Albany, New York

Gentlemen:

I am the owner of a new home. During my first heating season I bought oil from a company recommended to me by the contractor. I might also add that I had purchased what I thought was automatic heat. However, there were so many service calls that first season that I began to regard the service man as part of the equipment.

A neighbor of mine, after hearing of my experiences, suggested that I try Shell Oil. I did and the past heating season went off without a hitch. I believe that in all sincerity the credit can be given to Shell Fuel Oil with that wonderful additive FOA-5X.

Sincerely,
David F. Predpall

If you want to cut the number and cost of service calls ... if you want satisfied customers like Mr. Predpall ... why not investigate Shell Fuel Oil with FOA-5X?

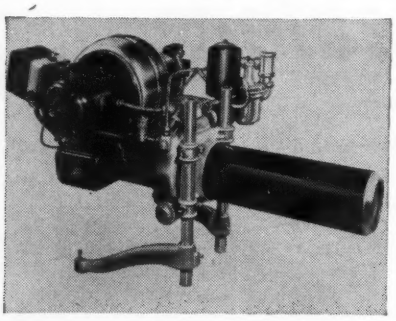
Call your Shell Distributor Now

SHELL

SHELL FUEL OIL *with* FOA-5X

Syncro-Flame developed for dual oil-gas Firing

A COMBINATION OIL AND GAS BURNER, Syncro-Flame, switches immediately from one fuel to the other either automatically or manually, as desired.



The Syncro-Flame is made in four sizes, with capacities from 100,000 to 1,350,000 Btu per hour, for all types of residential, commercial and light industrial use.

It has automatic electronic ignition which eliminates a standing pilot light; electronic safety controls to shut burner off instantly in case of fuel failure; the radiant, swirling flame is adjustable for highest combustion efficiency for either gas or oil; it burns natural, manufactured, mixed or LP gas and from No. 1 to No. 3 oil, and an outdoor temperature control to automatically switch the burner from gas to oil or oil to gas when the temperature reaches the control setting.

Made by: Synchronous Flame, Inc., 327 So. La Salle St., Chicago, Ill.

Magnus announces Cleaner for fueloil Preheaters

MAGNUS 751 is a cleaner designed to remove carbon deposits from the tubes of fueloil heaters without dismantling them. An empty 55 gal. drum is equipped with a reversible flow, gear-type pump, motor-driven, and piped for a capacity of 3 gals. per minute. Valves on the fueloil line are closed, the oil heater drained and a pipe connected from the drum to the exchanger's inlet port. The outlet port of the exchanger is connected to a return line to the drum, equipped with a screen. Next, a mixture of 1 part by volume of 751 and 2 parts of water is put in the drum, the pump started to pump the solution through the exchanger and the steam turned on in the exchanger to maintain a temperature of 140° F.

The solution is circulated through the exchanger for 8 hours, drained and replaced by a fresh mixture which is circulated for another 10 hours, this time in the reverse direction. At the end of the second pumping period the solution is left in the exchanger for an additional 14 hours, followed by a thorough flushing with water.

Made by: Magnus Chemical Co., Garwood, N. J.

Superior steam Generators adapted for outdoor Use

SUPERIOR steam generators may now be equipped with a specially-designed enclosure that will permit the units to be installed and operated outdoors. Many of the steam generators have been installed temporarily outdoors while boiler rooms were being built or renovated, but now the company can provide a "dog house" that covers all vital working parts.

The housing, while giving the required protection from the elements,

A QUIET CURE.....

for misalignment, backlash, vibration, surge

LOVEJOY Type UX Double Flex FLEXIBLE COUPLING

For truly quiet operation of fans, pumps and blowers, always insist on dependable Lovejoy Flexible Couplings. A special rubber center unit greatly reduces noise and increases flexibility. Lovejoy Couplings are quickly, easily installed in dark or close quarters . . . can't fall off when blower or pump units are serviced.

SEND TODAY FOR BULLETIN 514

IMPORTANT: Most fan manufacturers supply blowers with Lovejoy jaws on blower hubs.

LOVEJOY FLEXIBLE COUPLING CO.
5012 W. Lake Street Chicago 44, Ill.

Mfrs. of Lovejoy Flexible Couplings for all industrial services. Lovejoy Variable Speed Transmissions and Lovejoy Universal Joints.

THE BURNER OF TOMORROW!

Weatherall electronic turbulator WITH A 5 YEAR GUARANTEE ON PARTS

All these features never combined in a burner before

1. PHOTO ELECTRO EYE for positive flame control
2. SOLENOID VALVE for positive fuel control
3. SHELL HEAD which burns the modern catalytic oil with 33% less fuel

MANUFACTURERS
WEATHERALL ENGINEERS, INC.
387 Charles Street
Providence 4, Rhode Island

"This simple little valve really works wonders in ranch-type homes"

. . . says Alex Friebus, veteran heating dealer, Glen Ellyn, Illinois

Dealer Alex Friebus, left, talking to Honeywell representative C. D. Hitchcock

That's heating contractor Alex Friebus – partner in the Wagner Sheet Metal Company, Glen Ellyn, Illinois – talking about the Honeywell Dribble-Proof Oil Valve.

"We've had plenty of experience installing burners in basementless homes the last few years. And, as every heating man knows, there are plenty of problems involved with installations of this type.

"For one thing, there isn't much height for the chimney. Often you have an 8-foot pre-fab job to work with, which is not tall enough for really efficient draft. Gases formed by oil dribbles stay in the boiler – instead of being pulled up the chimney and carried away.

"It took us a little while to learn all the tricks of putting in a really efficient, fool-proof installation. And one of the first things we learned was to *always use* a Honeywell Dribble-Proof Valve. This valve *puts an end to leaky nozzles.* It takes only a few minutes to install, and besides keeping the burner cleaner, it definitely gets it off to a faster, surer start.

"The Dribble-Proof Valve also helps us cut down on non-profit service calls, especially during that first year in-warranty period – so you can see why I can't praise it enough."

H HONEYWELL

Another Plus-Profit Idea from Honeywell

Use the Honeywell Dribble-Proof Oil Valve on Your Installations!

Holds back oil flow until pressure reaches proper atomization point at burner nozzle. Then valve snaps open for cleaner, surer start – and snaps closed for dribble-proof cut-off, even though air is trapped in oil line. Easily installed on any service call. Costs only a few dollars.

For complete information and application data on the Dribble-Proof Valve, as well as for facts about other Honeywell controls, call your local Honeywell office. Or write Honeywell, Dept, FH-3-20, Minneapolis 8, Minnesota.

MINNEAPOLIS **Honeywell**

First in Controls

fueloil & oilheat

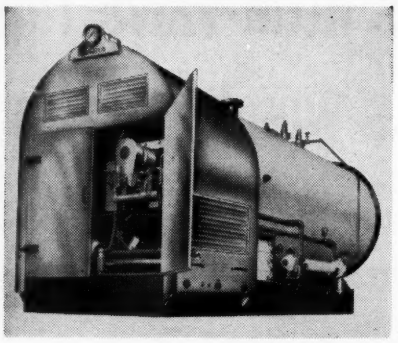
THE ONLY ONE-PIECE RUBBER FLEXIBLE COUPLING

with FLOATING BUSHINGS

MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

Our 25th Year

FLEXIBLE COUPLING MFG. CO.
8145 South Dobson Avenue
Chicago 19, Illinois

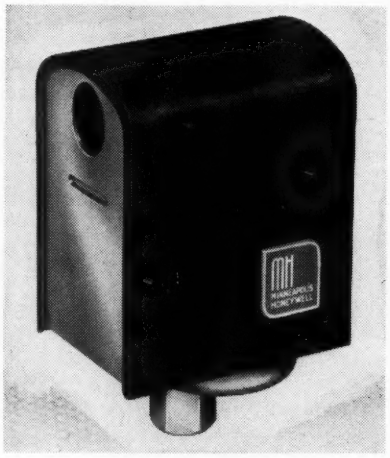


leaves all working parts accessible and incorporates safety features to prevent operation when the doors are closed when an engineer is in the enclosure. Construction is simple, watertight and effective.

Made by: Superior Combustion Industries, Inc., 1475 Broadway, New York 18, N. Y.

Low-pressure Steam control Unit is tamper-proof

PRESSURETROL, A TAMPER-PROOF, low-pressure steam control, which can



be applied to almost any domestic steam job, has recently been introduced on a mass volume basis.

The tamper-proof feature is a concealed adjustment which prevents owners from tampering with the setting and is expected to materially cut down on unprofitable service calls. Incorporated in its design are convenient conduit outlets.

Made by: Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Sheffield aluminum Paint withstands high Temperature

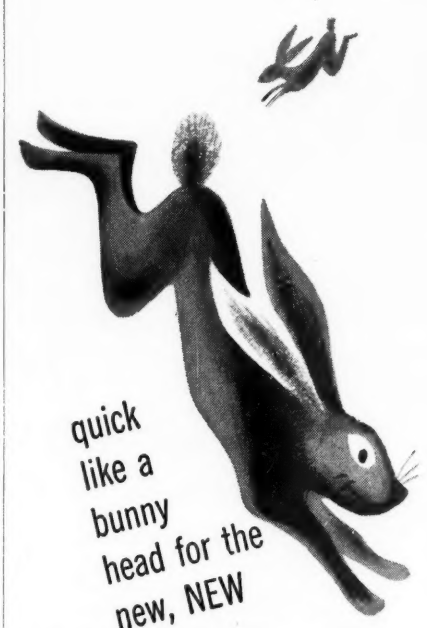
A SPECIAL RE-FORMULATION of Sheffield's Red Hot aluminum paint has resulted in a finish that will withstand 1600° F. Developed as a finish for ovens, stove pipes and furnaces, the paint may be applied to any surface where extreme heat is encountered.

Red Hot will not discolor, blister, chip, crack or peel off and retains its flexibility. In addition it is insoluble in ordinary solvents and when applied to any surface that requires heat, the paint initiates a fusing action that results in a smoothly fused aluminum surface.

Made by: Sheffield Bronze Paint Corp., 17814 Waterloo Road, Cleveland 19, Ohio.

Perfection Stove develops Furnace warm air Regulator

DEVELOPED to eliminate the cold floor problem in warm air heating installations, Perfection Stove's regulator distributes warm air according to the amount of heat in the furnace bonnet. When heated air in the bonnet reaches a pre-determined temperature, a single-speed blower comes on. The control mechanism in the regulator, actuated by a thermacoil arrangement, opens



COLUMBIA Boiler Burner Unit
at the
1952 OIL SHOW
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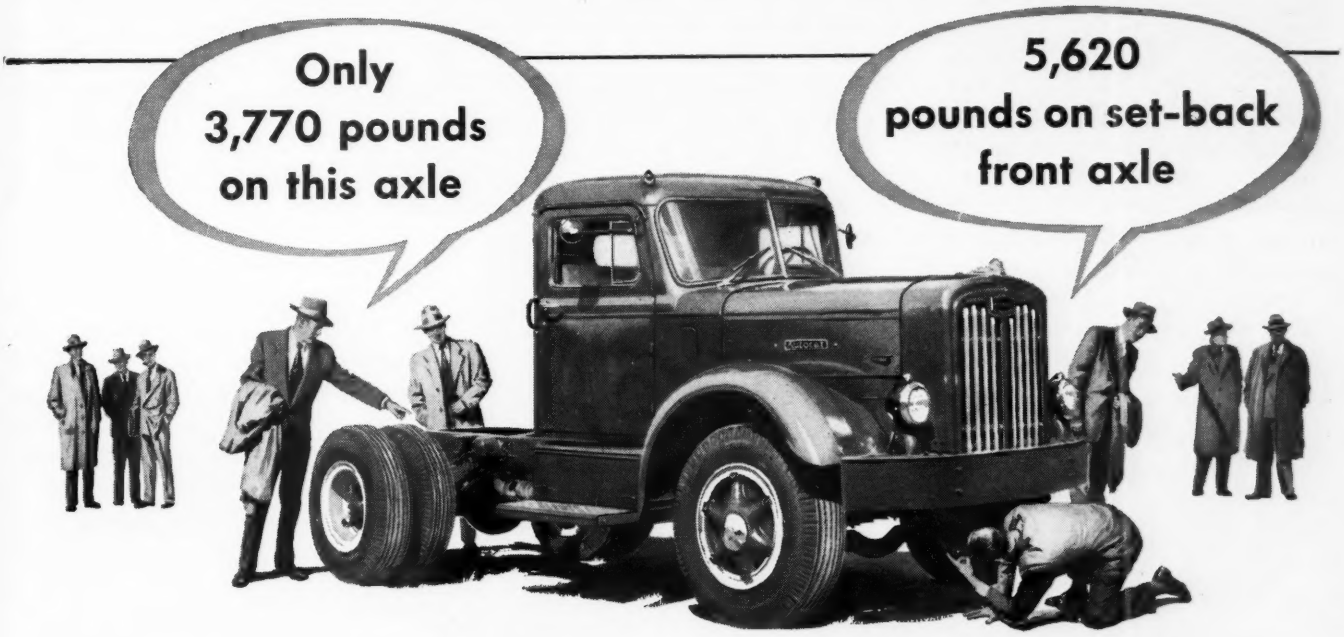
Booth 1055, commercial museum, phila., pa.
new low LOW cost..& top performance

NEW! A heavy-duty Autocar Tractor under 10,000 Pounds!



Just what the industry has been looking for . . . the 65-T

Here's important news for those highway haulers who are looking for ways to save weight without sacrificing strength and dependability. This new Autocar tractor, designed for 50,000 pounds, G.C.W., weighs *less than 10,000 pounds* ready for the road!

NEW WEIGHT DISTRIBUTION

In addition to its low gross weight, the 65-T embodies Autocar's latest thinking on *weight distribution.* The front, with its setback axle, weighs 5,620 pounds, and the rear axle – the one that bears most of the payload – *only 3,770 pounds.* That 3,770 pounds includes everything—fuel, oil, water, cab and tires.

HEAVY-DUTY CONSTRUCTION

And with it goes Autocar's famous heavy-duty engineering, which means that every part is made with an extra margin of strength and stamina. The result is a tractor of advanced design, unmatched for dependability, low-cost maintenance, and long life. See the great 65-T at your nearest Autocar Factory Branch today.

The Autocar Driver Cab

The Autocar Driver Cab brings passenger-car vision, comfort and safety to the man at the wheel. Design details such as wide vision, curved windshield with 56% more view, 5-way adjustable driver's seat conforming to any driver's best driving posture, full-focus instrument panel with every control within easy reach—everything has been done for the comfort of the driver.

Autocar Trucks

Established 1897

The Autocar Company, Ardmore, Pa.

Factory Branches and Distributors from Coast to Coast

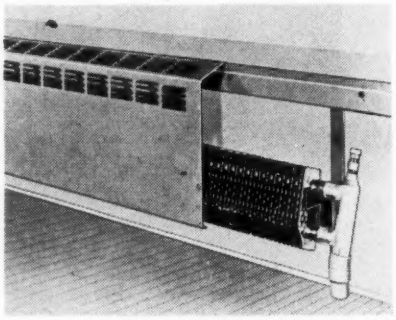
gradually delivering a controlled amount of air, coordinated with the amount of heat in the furnace bonnet.

Wide open for full flow at peak output, the vane reduces the air volume as bonnet temperatures drop, but shuts off the blower only when all of the warm air has been drawn from the bonnet. In this way a single speed blower distributes a modulated flow of heated air and eliminates cold blasts of air at the start of the heating cycle. The regulator operates with only one moving part, is built into the furnace at the factory and requires no adjustment.

Made by: Perfection Stove Co., 7609 Platt Ave., Cleveland 4, Ohio.

Brown Bayce-Heet features Tilt-Fin

BROWN Bayce-Heet baseboard convectors are announced as "high output" baseboard units for residential use. They are rated at 4.6 sq. ft. EDR per lineal ft. or 1,100 Btu at 215° F. The I-B-R rated units incorporate smart styling, being equipped with an attractive, efficient cover and grille.



The high rating is explained as made possible by Tilt-Fin design, whereby the diagonally opposed tips of each fin are folded down and the entire heating element is tilted to permit better and more efficient air circulation.

Made by: Brown Products Co., Forest Hills, N. Y.

McRay Protecto Rods for Boilers and water Tanks

MCRAY Protecto rods have been scientifically designed to eliminate scale, corrosion and electrolysis in hot water tanks, heaters, radiators and boilers. They consist of a series of galvanic cells which reverse the electrical attraction that exists in water filled vessels and sets up an electromotive force which renders inert the salts and minerals of the water and removes existing scale formations. The rod neutralizes electrolysis and the corrosive action of oxygen and similar elements. Made up of a number of copper and zinc plates, assembled in a series like a battery, the rods set up counter-electric action.

They are installed by insertion in the

The Valves DON'T LIME UP

on NEW IMPROVED THERMO-DRIP Automatic HUMIDIFIERS

Valves are cradled in end of thermostat tube. Kept air tight. Water cannot spray. It is funneled. Even with valve wide open water runs smoothly. This overcomes clogging . . . liming up.

Water drops into pan only after it is hot. Each drop sizzles into steam as it strikes heated pan surface. This puts the MOST MOISTURE into air stream when it is MOST NEEDED.

Write today for complete information. FO-32

AUTOMATIC HUMIDIFIER CO. CEDAR FALLS, IOWA

FLORITE Direct-Reading AIR VELOCITY METER

- *A practical, accurate air velocity meter for heating, air conditioning, and ventilating work. Indispensable for measuring grille velocities and air deliveries from registers and grilles; for balancing forced air heating systems, and for checking air distribution of all kinds of ventilating systems.*
- *Accurate velocity readings, automatically averaged over a 3" dia. free area, instantly indicated in feet per minute.*
- *Extension handle facilitates positioning of instrument away from the observer for readings in hard-to-reach locations, or where the observer's body would interfere with the normal air movement.*
- *Unique scale lock makes possible to retain scale reading when desired until the lock is released—an indispensable feature where extension rod is used to position instrument away from the observer.*
- *Leather case is furnished as standard equipment for added protection when the instrument is not in use and for convenience when carrying it in the pocket.*

Ask your Jobber for the FloRite or write for Leaflet 760.

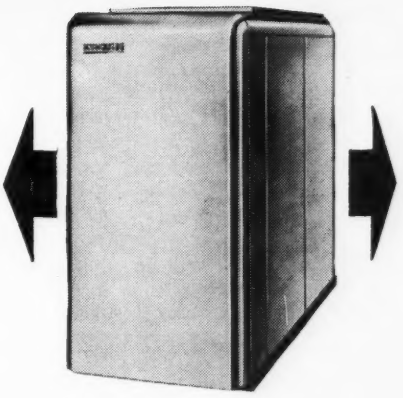
BACHARACH INDUSTRIAL INSTRUMENT CO.
7000 BENNETT STREET • • PITTSBURGH 8, PA.

IT'S BIG NEWS in HEATING!

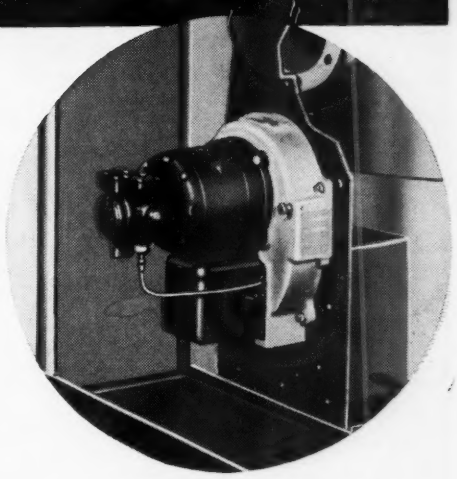
IN Luxaire® UNITS

You can INSTALL an OIL BURNER OR a GAS BURNER and have an *Approved* Heating Unit for *Either Fuel!*

For an APPROVED Gas Fired Unit install the Luxaire Gas Burner.



The Luxaire Basement Air Conditioning Unit Built for EITHER GAS or OIL APPROVED for BOTH.



For an APPROVED OIL Fired Unit Install the Luxaire Oil Burner.

● It is big news! It is important news, to heating contractors that they can sell the same identical furnace to their prospects who wish to burn Oil, as they sell to prospects who prefer to use Gas.

It is big news that with Luxaire you have the outstanding advantage of selling a line of heating equipment, in which in many cases, the same unit is approved as a Gas fired unit or as an Oil fired unit, as a consequence of its ingenious engineering and design.

It is big news that heating contractors can install the unit with an Oil burner now—AND convert it to Gas next year or any time, by simply changing the burners.

With Luxaire you have double selling features—double buying features. You double customer satisfaction because you know and he knows that with Luxaire, fuel restrictions are now a thing of the past.

To meet every demand there's a Luxaire unit for all sizes and all types of Gravity . . . Forced Air . . . Perimeter heating installations.

★

*Also—have you received the NEW—LOW prices on Luxaire—if not, contact your Luxaire jobber without delay, or write direct to us.

THE Luxaire® C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

HEATING & AIR CONDITIONING UNITS

fueloil & oilheat

Use "CRESCENT PARTS" Service

SERVING THE ST. LOUIS TRADE AREA

Authorized Fuel Unit Service Station

"FACTORY REBUILT" Repair Exchange control service on all popular makes at regular manufacturers list prices and trade discounts.

STOKER AND OILBURNER PARTS

SEND US YOUR ORDERS OR INQUIRIES

CRESCENT PARTS AND EQUIPMENT CO., INC.

825-831 S. Boyle Avenue St. Louis, Missouri

. . . . New Products

hot water outlet of hot water heaters, a brass coin holding the rod suspended in the water. In boilers, Protecto rods should be used in the head or hot water line directly from the boiler. The return line will carry treated water back through the boiler and prevent rust and scale in the entire system.

Made by: McRay Products of California, 4907 Melrose Ave., Los Angeles 29, Calif.

Universal develops suction line Strainer

UNIVERSAL VALVE CO. has developed a 1½" suction line strainer that fits a 2" tank opening. It is so designed that liquid enters from the sides instead of the bottom, so that water is not trapped and the line is kept free from foreign matter and sediment. This 611G suction line strainer can be used on installations having any size opening 2" or larger and where volatile compounds have been used it eliminates the danger from sparks that might be caused when chipping out the bushing.

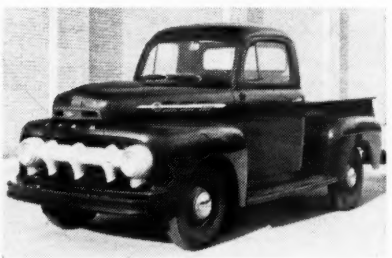
Body of the strainer is galvanized iron, 8 mesh screen, OD fits 2" opening and threaded for 1½" pipe thread. The 611G can be made in other materials, meshes and sizes, as well.

Made by: Universal Valve Co., 555 Third Ave., Elizabeth 4, N. J.

Ford Trucks offer five Engines in new Line

FORD'S new truck line for 1952, with models designed to fill 97% of all hauling needs, offers a choice of 5 engines, including 3 completely new high-compression, low-friction overhead valve units. The engines range from 101 to 155 hp, torque ranges from 185 lbs. feet to 284, made up of three V-8 and two 6-cylinder types.

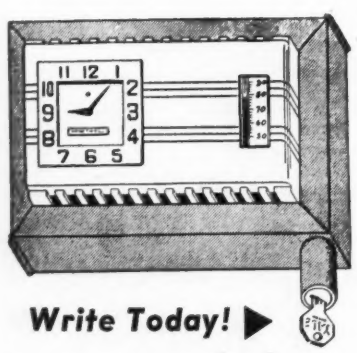
Series F-1 through F-8 Ford trucks range from light pickup units of 114" wheelbase and 4,700 lbs. gross vehicle weight to extra heavy-duty trucks with a maximum 195" wheelbase and gross vehicle weights up to 41,000 lbs. All regular units are available with 5-Star



cabs or with 5-Star extra cabs and conventional models can be furnished in all 8 series of the line. Additionally, special purpose units include cab-over-engine vehicles.

The engines feature Power Pilot carburetion-ignition systems, aluminum autothermic expansion control pis-

Seen the new THERMOLOK models?



Now you can guard the settings on Penn, Perfex, Sampsel, Detroit Lubricator, and General Electric thermostats with new THERMOLOK models. In addition, the standard models illustrated here are designed to protect settings on Minneapolis-Honeywell thermostats and Chronotherms.

- **15 seconds to install**
- **No holes in wall**
- **No heat lock**
- **No nails or screws**

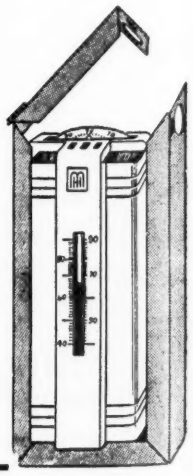
Write for name of your nearest jobber

Exclusive territories open for manufacturers representatives.

THERMOLOK MFG. COMPANY

541 ROGERS AVE., BROOKLYN 25, N. Y.

Write Today!



HERE THEY ARE...SENTRY'S TWO NEWEST ADDITIONS TO THEIR EVER-POPULAR

AT-A-GLANCE

(DIRECT AND REMOTE)

TANK GAUGES

THERMA-GAUGE

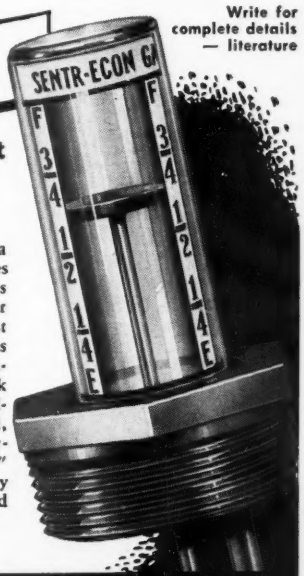
A superior quality, precision instrument with full view, solid red thermometer-type indicator

Without question, here is the easiest to read, *accurate measure* gauge on the market—And, the easiest to install, whether tank is empty, full or partially full. Unit features zinc base metal, two-piece die-cast assembly — Unbreakable red plastic assembly nut — Calibration chart, sealed between heavy, heat-resistant plastic domes — Brass rivets — And, a *double coated* cork float that's impervious to oil, many chemicals and acids. No gears, magnets, cams or tapes. Guaranteed to withstand in excess of 70 lbs. pressure per sq. inch. Tailor-made to fit individual tanks up to 12 ft. deep. Calibrated and factory adjusted.

QUICKLY, SIMPLY INSTALLED. Illus. at left shows how entire calibration and float assembly may be inserted and positioned *after* two piece die-cast tank plug has easily been installed in tank — only an ordinary wrench is needed.

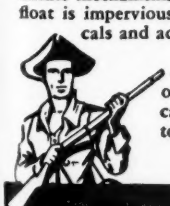
SENTR-ECON

Write for complete details — literature



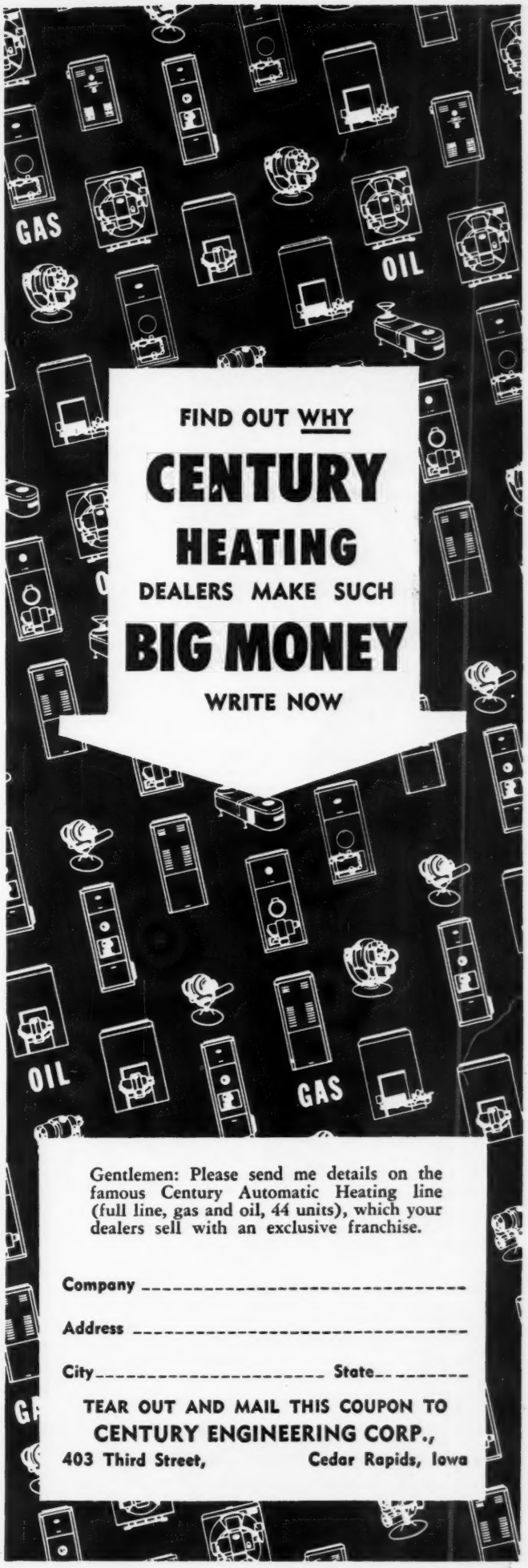
A new, durable, low cost instrument for economy installations.

Exceptionally high quality for such a competitively priced gauge. Features patented *double dome* with calibrations positioned between inner tube and outer heat-resistant plastic shell. Also, die-cast tank fitting — plated metals — brass rivets. No gears, magnets, cams or intricate mechanisms. *Double coated* cork float is impervious to oils, most chemicals and acids. Simple to install, even in partially-filled tanks. 1½" openings only. Factory calibrated and adjusted to insure accuracy.



KRUEGER *Sentry* GAUGES

GREEN BAY • WISCONSIN



FIND OUT WHY

CENTURY HEATING

DEALERS MAKE SUCH

BIG MONEY

WRITE NOW

Gentlemen: Please send me details on the famous Century Automatic Heating line (full line, gas and oil, 44 units), which your dealers sell with an exclusive franchise.

Company _____

Address _____

City _____ State _____

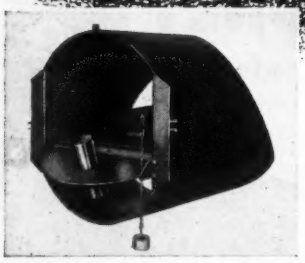
TEAR OUT AND MAIL THIS COUPON TO

CENTURY ENGINEERING CORP.,

403 Third Street, Cedar Rapids, Iowa

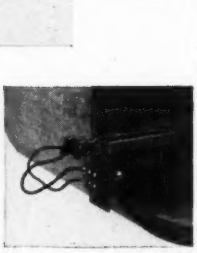
it's another Field First and Best!

The "M-G" Double-Acting Field Draft Control for gas Fired Heating Plants*



*Available at present in commercial sizes only.

Optional auxiliary switch will close main gas valve or sound alarm in case of blocked flue or prolonged down-draft, preventing escape of carbon monoxide into building.



Now there's a Field for gas, too! And the same accuracy and sensitivity that have made Field first for coal and oil-fired heating plants make the new Field "M-G" first for gas-fired heating plants. It's the first and only barometric draft control engineered exclusively for gas. Write today for complete details.

See our Display Booth 152, Oil Heat Institute Convention, Philadelphia.

THE DRAFT CONTROL . . . that's advertised nationally in *BETTER HOMES & GARDENS*

Field CONTROL DIVISION
of H. D. Conkey & Company, Mendota, Illinois
AFFILIATES:
Conco Building Products, Inc. • Brick, Tile, Stone
Conco Engineering Works • Heating Equipment

tons, full-pressure lubrication, free-turn valves, precision-molded improved alloy crankshafts, camshafts and exhaust valves.

Made by: Ford Div., P. O. Box 638, Dearborn, Mich.

American-Standard introduces replaceable Type air Filter

INTRODUCTION of a white, replaceable type air filter for use in forced air heating and air cooling systems has been announced by American Radiator. The filter is standard equipment on all Sunbeam units and is available in all standard sizes, packaged 12 in a carton. Special sizes can be obtained on request.

It is made of continuous, slightly curled, interlaced glass filaments, held in place with a thermoplastic bond. Filaments are sprayed with a special adhesive and the filters themselves are held in a fiberboard casing between metal grilles.

Progressive packing is employed, whereby the glass filaments are packed evenly across the air inlet side of the filter and then packed progressively tighter all the way to the air exit side. With this construction the filaments form a continuous web that traps dirt on the inside rather than on the face of the filter.

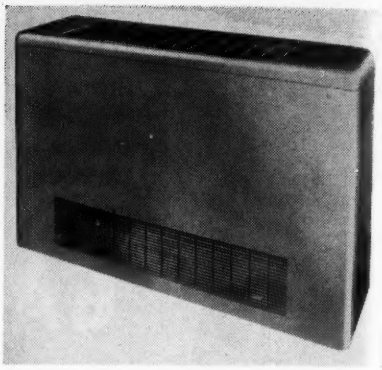
Made by: American Radiator & Standard Sanitary Corp., Pittsburgh 30, Pa.

Trane introduces 3 new Force-Flo heater models

THREE NEW MODELS of Force-Flo heaters have recently been introduced. The units are designed to heat lobbies, entrances, showrooms, foyers, and other locations requiring a high volume of heat. All models have been streamlined in design to simplify maintenance.

The new models comprise a free-standing unit; a semi-recessed design and a completely recessed cabinet. All have front inlet and front outlet grilles designed for blanketing areas where air must be discharged horizontally from the unit.

Design improvements include a cabinet front removable by loosening two quick-acting cam locks, grilles that are integral parts of the cabinets, and a headering system that permits concealed piping in any position, including ceiling mounting.

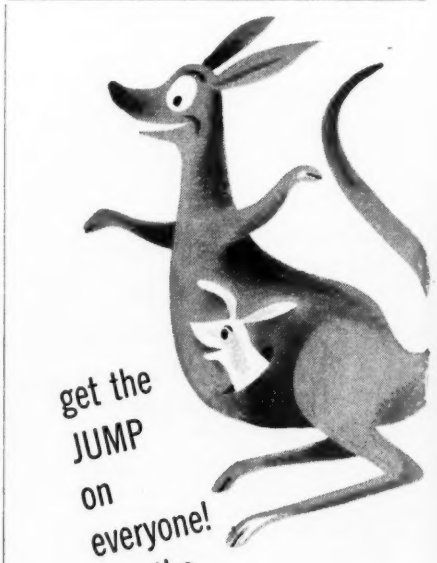


Twin centrifugal fans, pushing air out over fin and tube heating coils, enable the heaters to block cold draft and raise room temperatures quickly. All units can be installed in either steam or hot water systems, with capacities up to 105,000 Btu.

Made by: Trane Co., La Crosse, Wisc.

H. C. Little Heater has manual or automatic Control

MODEL 72 oilburning space heater, announced by H. C. Little, has a Btu output of 52,350 and is available with manual control or full automatic ther-



COLUMBIA Boiler Burner Unit
at the
1952 OIL SHOW
April 14 to 18, incl.
Booth 1055, commercial museum, phila., pa.
new low LOW cost..& top performance

The plain hard facts prove you save with

CHEVROLET Advance-Design TRUCKS

FACT No. 1

MORE TRUCK FOR LESS MONEY

Compare the list price of a Chevrolet truck with that of any other truck built to handle the same payloads. You'll find the Chevrolet truck lists for less, yet brings you ruggedness, stamina and great truck features you won't find in many trucks costing much more.

FACT No. 2

ROCK-BOTTOM OPERATING COSTS

Dollar-for-dollar comparisons prove that Chevrolet trucks cost least to own and maintain. Valve-in-Head economy saves on gas, in the 105-h.p. Loadmaster or 92-h.p. Thriftmaster engines. Four-way engine lubrication reduces wear and oil costs. Rugged construction means long life.

FACT No. 3

ENGINEERED FOR YOUR LOADS

Every Chevrolet truck is *factory-matched* to payload and service requirements. You don't have to buy more truck—or settle for less truck—than you need for your loads. Frame, axles, springs, body, brakes and power are balanced for the job.

FACT No. 4

LOWER, SLOWER DEPRECIATION

Records show that Chevrolet trucks traditionally bring more money at resale or trade-in than many other makes. Chevrolet's market value stays *up* because the value stays *in!* Here is important and convincing proof that Chevrolet is the best truck buy!

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the 105-h.p. Loadmaster or the 92-h.p. Thriftmaster—to give you greater power per gallon, lower cost per load • POWER-JET CARBURETOR—for smooth, quick acceleration response • DIAPHRAGM SPRING CLUTCH—for easy-action engagement • SYNCHRO-MESH TRANSMISSION—for fast, smooth shifting • HYPOID REAR AXLE—for dependability and long life • TORQUE-ACTION BRAKES—on light-duty models • PROVED DEPENDABLE DOUBLE-ARTICULATED BRAKES—on medium-duty models • TWIN-ACTION REAR BRAKES—on heavy-duty models • DUAL-SHOE PARKING BRAKE—for greater holding ability on heavy-duty models • CAB SEAT—with double-deck springs for complete riding comfort • VENTI-PANES—for improved cab ventilation • WIDE-BASE WHEELS—for increased tire mileage • BALL-TYPE STEERING—for easier handling • UNIT-DESIGNED BODIES—for greater load protection • ADVANCE-DESIGN STYLING—for increased comfort and modern appearance.

CHEVROLET DIVISION OF GENERAL MOTORS, DETROIT 2, MICHIGAN

IT PAYS TO REMEMBER!

EVERY
OIL-BURNING UNIT
NEEDS a *Klemm*
FUEL OIL FILTER

Easy to Install . . . Big Market
Good Profit . . . Repeat Sales

You know better than anyone else how few oil-fired boilers, space heaters, hot water tanks, etc. are equiped with oil filters. Here's a ready-made market—*a profitable market*—for you to go after. Suggest a fuel oil filter on every service call, a high-efficiency KLEMM, of course—the only filter that has CHEMISTONE, the original controlled porosity filter element. Sell heating comfort . . . sell KLEMM! Easy sales! Good mark-up! Satisfied customers!

Order a stock from your jobber today

SHOWS . . .
TELLS . . .
SELLS . . .

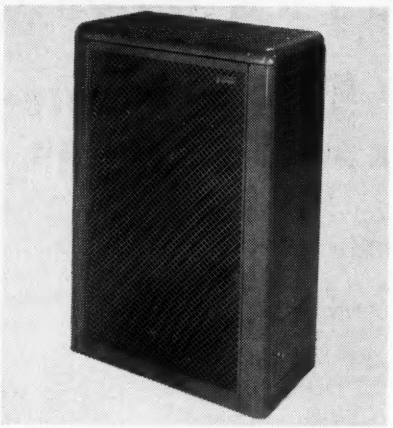
Drop-in customers and shoppers are attracted by this eye-catching display. It's free with each order for 12 or more Klemm (Jr. Model) Oil Filters. Put it to work for you!

"Millions Since 1932"

Klemm

AUTOMOTIVE PRODUCTS CO.
1718 N. Damen Avenue • Chicago 47, Illinois
Mfd. in Canada by Elgee, Ltd. 410 Hopewell—Toronto
Export Div.: Guiterman Co., Inc. 35 S. Williams St., New York, N. Y.

. . . . New Products



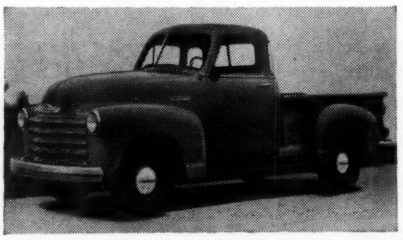
mostat control with electric ignition. It stands 40¾" high, is 28" wide and is 19" deep, less tank. With the tank in place the depth increases to 25¼". The heater is Underwriters' approved and conforms to Commercial Standard CS-101.

Model 72 is finished in a smooth brown hammertone paint that blends well with home furnishings.

Made by: H. C. Little Burner Co., San Rafael, Calif.

New Chevrolet Trucks comprise complete Line

NEW CHEVROLET TRUCKS, made up of models from 22 series on 10 wheelbases, cover more than 90% of the truck market, with gross vehicle weights from 4,100 to 16,000 lbs. An



important improvement for 1952 is more efficient carburetion for smoother performance during the warm-up period. Redesigned cab door lock pillars and newly positioned striker plates permit the use of new push button door locks, with an optional lock available for the left door.

These trucks again are powered with either of two valve-in-head engines, the 92 hp Thriftmaster or the 105 hp Loadmaster, with four-way lubrication and controlled cooling also featured. Cab comfort continues to be emphasized in these models.

Made by: Chevrolet Motor Div., General Motors Bldg., Detroit 2, Mich.

DON'T
forget it!
the new,
NEW

COLUMBIA Boiler Burner Unit
at the
1952 OIL SHOW

April 14 to 18, incl.

Booth 1055, commercial museum, phila., pa.

new low LOW cost . . & top performance

AN OUNCE OF PREVENTION

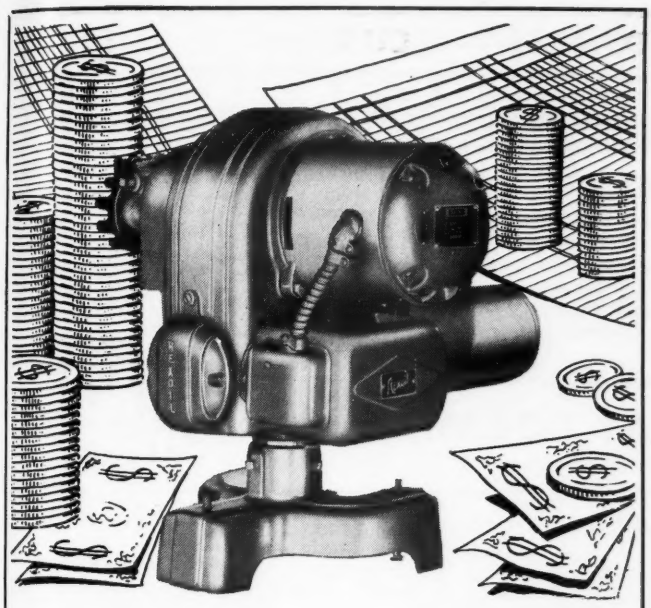
is worth a POUND of CURE

This old adage was never more true than in the case of leaking connections. You know what damage they can cause . . . what they cost to repair.

Rectorseal #2 is the ounce of prevention you need to prevent such leaks. Thin in the can for quick, economical, easy application, Rectorseal #2 thickens in the joint to a plastic elasticity that maintains a perfect seal for the life of the connection. It has been proved by more than 15 years use by the oil industry. SEND FOR FREE SAMPLE. Prove to yourself that Rectorseal #2 is the finest sealing compound you ever used.

RECTORSEAL, Dept. O
2215 Commerce St., Houston 2, Texas

RECTORSEAL
Patented. Trade Mark Reg. U. S. Pat. Off.
NUMBER TWO



NOW...SEE PROFITS PILE UP FASTER ON YOUR LEDGER SHEETS

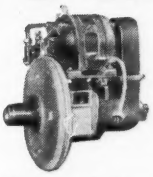
TRY THIS PLAN Install *one* **REXOIL** burner. *See how you can add steady profits to your ledger sheets.* Service calls are all but eliminated . . . installation costs are negligible . . . customer satisfaction and goodwill is high. **REXOIL** is a product of over a quarter century of skilled experience. Its advanced design burns either distilled or catalytic oils with equal efficiency . . . and without *any* critical adjustments. *See these many advantages for yourself*—install one **REXOIL** . . . it's the *only* way you can tell *real* oil burner value.

WRITE TODAY . . . ORDER ONE REXOIL

REXOIL

Residential, Commercial and Industrial Oil Burners for #2 oil

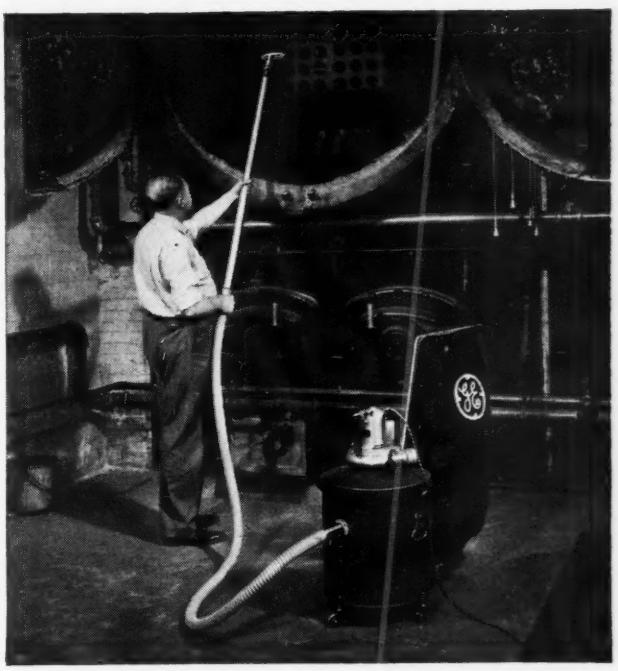
Furnace and Boiler Units



Horizontal Rotary Oil Burner for Heavy Oils

REIF-REXOIL, INC.
37 CARROLL STREET BUFFALO, N. Y.

Let this furnace cleaner bring you PROFITABLE CLEANING BUSINESS



More frequent cleaning of furnaces and boilers pays in fuel saved, experience shows.

You can keep your service people profitably engaged if you recommend more frequent cleaning to your customers.

Modern General Electric furnace-cleaning equipment makes the work easy. With this unit, the soot that cuts down heating efficiency can be quickly and easily removed.

Furnace-cleaning equipment was designed by General Electric engineers to make your furnace-cleaning service more profitable. Learn all about this powerful, speedy cleaner and the accessories available for use with it.

YOUR FIRST STEP **toward Lower Furnace Cleaning Costs and MORE Satisfied Customers is taken when you mail coupon below.**

Write for your copy today

Furnace and Boiler Cleaners

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, Dept. 22-1638
1285 Boston Ave., Bridgeport 2, Conn.

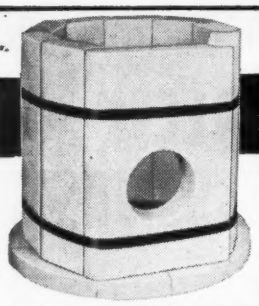
Certainly, I'm interested in more efficient Furnace Cleaning Equipment. Send details.

Name .....

Firm .....

Address .....

City ..... Zone ..... State .....



FOR SATISFIED CUSTOMERS — INSTALL . . .

AMERICAN COMBUSTION CHAMBERS

100% "KILN-CURED" LIGHTWEIGHT REFRACTORIES

Equipment manufacturers are invited to bring their special design problems to us.

HIGH QUALITY

American Chambers are made from the finest, high grade refractory materials combined with proper "Kiln-curing". They will withstand 2500 degree temperatures and will not crumble in water.

EASY INSTALLATION

Controlled manufacturing and careful design of American Chambers makes for fast and easy installation. The flexible pieces fit together with a minimum of effort.

TOP PERFORMANCE

Because of the high quality of materials used in American Chambers they provide faster heat-ups, quieter burner operation and savings in fuel.

AMERICAN

JOBBERS: Write today for price sheet.

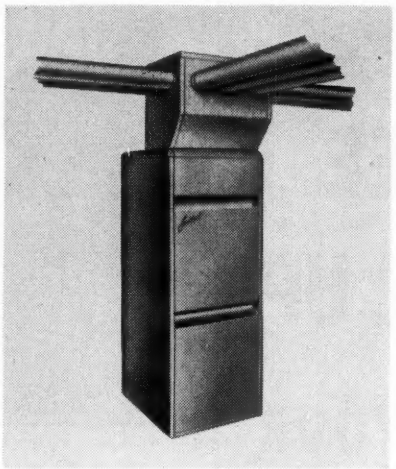
AMERICAN CLAY FORMING CO.

TIFFIN, OHIO

. . . . New Products

Janitrol Save-Way System employs four-inch Ducts

THE JANITROL Save-Way air system, recently demonstrated, utilizes 4" round ducts and simplified installation methods that save up to 35% on material and labor costs, at the same time conserving sheet metal. The system combines the principles of perimeter heating, using outside wall registers and continuous air circulation to eliminate cold floors, sudden drafts and noticeable temperature between floor and ceiling.



Arrangements have been made with the Clayton and Lambert Co., through their distributors, to supply the pipes, fittings and diffuser registers in the sizes required for the Save-Way air system. Janitrol's oilfired equipment incorporates necessary performance features to provide efficient operation with the new system. A complete installation guide and manual, including tables to simplify the sizing of specific jobs, has been prepared.

Made by: Surface Combustion Corp., Toledo, Ohio.

Beck Engineering has vertical and suspended Units

MODELS VJO AND HJO have been added to the Beck Engineering line. These Thermoil furnaces are for vertical and suspended installations. VJO units are the vertical models, designed for utility, basement or perimeter heating systems; HJO are ceiling models, to be used wherever a horizontal duct type unit is desirable or where space is at a premium. The 10 models each in the VJO and HJO lines range from 60,000 to 390,000 Btu/hr, all equipped with flange-mounted gun type oilburners. HJO models are shipped with hanger loops affixed.

Heat exchangers in the furnaces are made of heavy steel, continuous seam welded to assure gas-tight construction. Thermoil furnaces feature compact size and are equipped with conservatively rated blowers and motors. Casings are of heavy steel construction,

make a BEE line for the new, NEW

COLUMBIA Boiler Burner Unit

at the

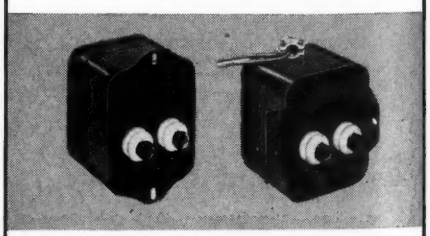
1952 OIL SHOW

April 14 to 18, incl.

Booth 1055, commercial museum, phila., pa.

new low LOW cost..& top performance

always specify **UNIQUE** IGNITION TRANSFORMERS *for dependable performance!*



- Standard mountings or designed to meet your specifications.
- Radio shielded and adaptable to any oil burner installation.
- Unconditionally guaranteed against mechanical and electrical defects. Write for details today!

UNIQUE ART MFG. CO., INC.

Makers of Quality Products Since 1910

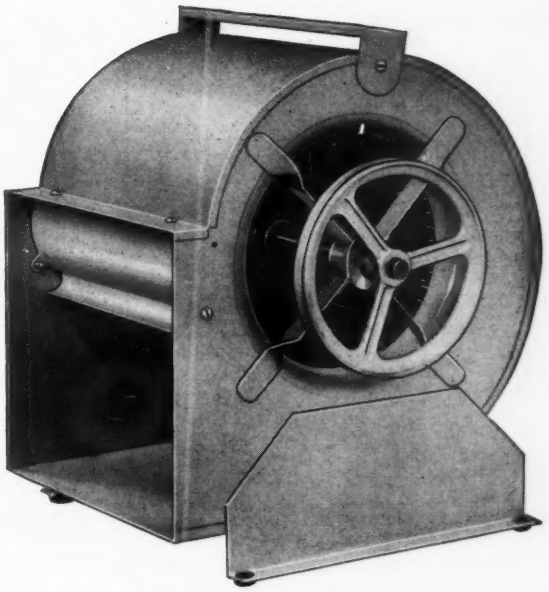
200 WAVERLY AVENUE, NEWARK 8, N. J.

Brundage assures you the finest with Standardized Production of . . .

BRUNDAGE SERIES "X" BLOWER ASSEMBLIES

Numbering among its customers such leading furnace makers as Timken, Ingersoll, Morrison, Kalamazoo, Armstrong, Waterman-Waterbury, Mayflower, Norge, and numerous others, Brundage has earned a reputation for offering utmost design flexibility and performance in its blowers. Always, emphasis has been placed on over-size shafting for continuous bearing life and virtually no servicing.

Now, in concentrating production efforts largely on the sensational Series "X" Blower Assemblies, Brundage provides an even broader range of sizes and styles to answer your particular requirements.



BRUNDAGE BLOWER-FILTER "PACKAGE" UNITS

Production at Brundage also concentrates on Blower-Filter Units, incorporating the Series "X" Blower Assemblies.

Throughout these units can be noted the thorough engineering that has distinguished Brundage equipment for 33 years. Engineering that insists upon ease of selling and installation for you . . . economical comfort both winter and summer for the user.

For conversion jobs, as well as new installations, Brundage Blower-Filter Units merit your investigation.

Brundage COMPANY

Blower Specialists Since 1919

515 NORTH PARK STREET
KALAMAZOO 11, MICHIGAN

Write today for literature covering Brundage Series "X" Blower Assemblies and Brundage Blower-Filter Units.

POWERFUL
VACUUM
FURNACE CLEANER
AND
POWER BLOWER
AT
LOW, low price
$111.65

Here's the vacuum that gets you into the cellar at the lowest price; allows cheap cleaning jobs to develop into profitable service work. The Pullman Vacuum is inexpensive, powerful, portable and has no outside bag. It will handle home boilers and small industrial jobs. The complete unit of efficient universal motor, life-lubricated bearings, electro-welded steel container, capacity 1½ bushels, baked enamel finish, plug-in casters, 35′ cord, 10′ hose and 27″ crevice tool is only $111.65. Send for name of nearest distributor. Jobber inquiries invited.

OHI

USE to blow out fuel tanks, clean air ducts, registers, beams, floors and in shop maintenance.

Pullman

PULLMAN SALES CORP.
MFR: BOSTON 19, MASS.

insulated and finished in grey enamel with dark green trim.

Made by: Beck Engineering Combustion Kompany, 2100 Cole St., St. Louis 6, Mo.

Lo-Boy forced Warm-air Furnace is Compact unit

BASEMENT LO-BOY is an oil and gas fired basement forced warm air furnace with an output of 93,000 Btu/hr. Factory assembled for installation, it includes

a full-size blower and a three pass heat exchanger. The unit measures 20″ wide, 46″ long and 45″ high, favorable for low-ceiling basements. A switch device allows this unit to supply cool circulating air during the summer months. It has a light green hammerloid enamel finish.

Made by: Delta Heating Corp., Trenton 8, N. J.

Wayne adds Counter-flo and suspended Units

ADDITIONS to the Wayne 1952 line of heating equipment have been announced. They include a 75,000 Btu oilfired gravity warm air furnace; three sizes of blower filter package units; 75,000 and 85,000 Btu oilfired cased and 90,000 and 112,000 Btu oilfired "built-in" type down-flo winter conditioners; 85,000 Btu ceiling-suspended oilfired furnace and three gasfired models.

All models are fired with Wayne pressure type oilburners and feature availability for competitive selling and efficient performance for operating economy. A new catalog folder gives complete details.

Made by: Wayne Home Equipment Co., Fort Wayne, Ind.

Readers' Forum

COMO OIL COMPANY
Duluth 2, Minn.

Editor:

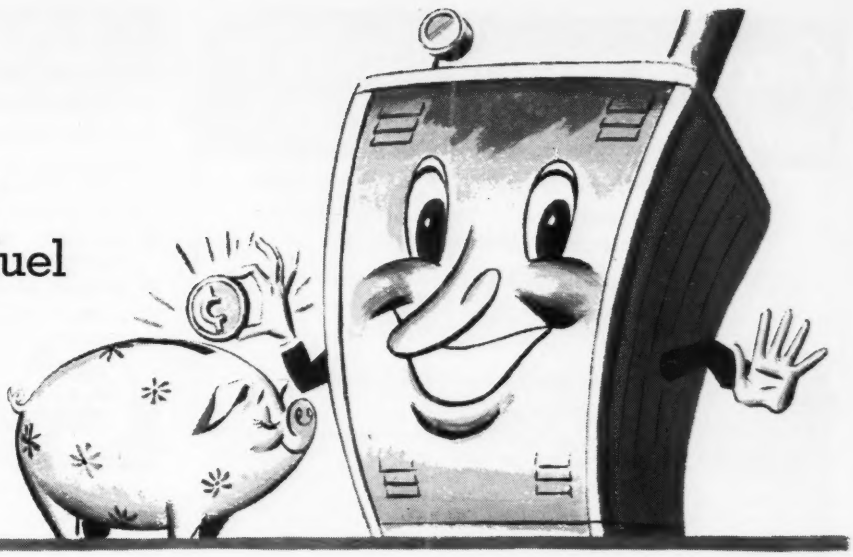
I can't resist writing you about a statement appearing in the "Government Influences on Fuel" page in the December issue.

This states that some Midwest suppliers have asked OPS for permission to raise tank car prices because they guaranteed jobbers' margins during the price freeze. In saying "It seems these suppliers have been guaranteeing margins to jobbers who were caught by the freeze last December with their tank wagon prices down," the inference one would get is that suppliers actually did guarantee margins.

We have a fueloil margins committee in the Northwest Petroleum Association and it made a thorough study of fueloil margins during the past year. Our committee does not know of any cases where suppliers have guaranteed a fueloil margin in excess of the dif-

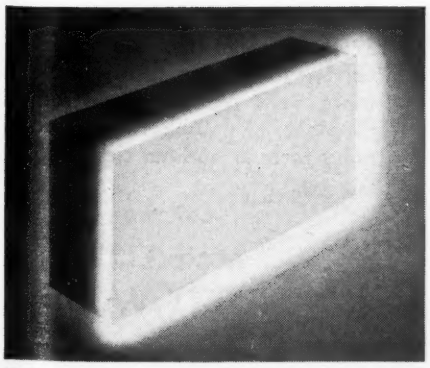
COLUMBIA Boiler Burner Unit
at the
1952 OIL SHOW
April 14 to 18, incl.
Booth 1055, commercial museum, phila., pa.
new low LOW cost..& top performance

"Now I heat up faster and save money on fuel with J-M Insulating Fire Brick!"



"We knew our 'skin-heat-in-seconds' would get you on the job in a hurry!"

You can build better fireboxes with this insulating fire brick that saves up to 10% on fuel



"Skin-heat-in-seconds" of J-M Insulating Fire Brick is demonstrated in this photograph. Within seconds after the burner goes on, the entire inside surface of the firebox becomes white-hot. Laboratory tests prove that this brick can save up to 10% on fuel.

IT'S EASY to make *lifetime* customers by saving them up to 10¢ on every dollar they spend for fuel. *Just build their oil burner fireboxes with J-M Insulating Fire Brick that saves fuel by getting a skin-deep curtain of white-heat intensity within seconds!*

Customers will also appreciate the fact that J-M Insulating Fire Brick in their firebox results in far less soot, smoke, and odor. And its light weight, cellular construction contributes substantially to quieter oil burner operation.

You'll find it easy to install J-M Insulating Fire Brick. Cut them quickly with a hacksaw blade . . . use them to build any shape or size firebox specified by the oil burner manufacturer. Recommended brick for domestic oil burner fireboxes are JM-20, JM-23, JM-26. For industrial use . . . JM-28 and JM-3000.

See your J-M Distributor for further information about these brick that heat up faster and save more money . . . or write Johns-Manville, Box 290, New York 16, New York. In Canada, 199 Bay Street, Toronto 1, Ontario.

For sealing against gas and air leaks, use J-M FIREITE* Asbestos Furnace Cement. For lining hearths of rotary burners, use J-M STANDARD FIRECRETE* — a hydraulic setting refractory — ready for use in 24 hours.

*Reg. U.S. Pat. Off.

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For "Skin-Heat-in-Seconds" in Fireboxes

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Check our amazing VALUES on complete* FUEL OIL TRUCKS!

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Side or rear installed equipment available on all tank sizes from 1300 gallon up to 2350

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Look at the advantages in customer sales appeal along with savings in maintenance costs:

- **Increases customer satisfaction.**
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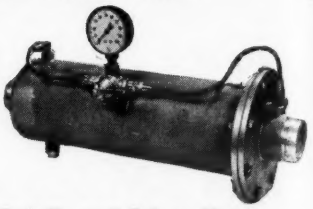
- **Protects truck equipment.**



COOTE

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336 Gregory Ave., West Orange, N. J.

ferences between the published tank car price and the tank wagon price. Our auditors' report showed an average of the firms audited of 2.357 cents per gallon, which shows again that there was no subsidization of margins.

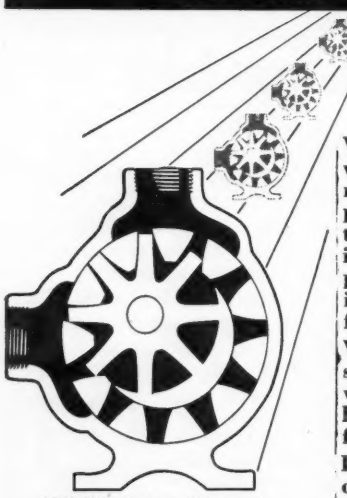
Through Otis Ellis (general counsel, National Oil Jobbers Council) we have advised OPS that Midwest jobbers have not been guaranteed a margin and it is our understanding that OPS will not consider giving any suppliers permission to increase their tank wagon prices on the basis that they have been guaranteeing margins until any jobbers affected in the Midwest have the opportunity to testify in this regard in Washington.

Don't think that this letter is intended to be critical, as it is not, but just wanted to point out that this particular article may give credence to some suppliers' contention that they have been guaranteeing fueloil margins in the Midwest.

MYLES F. HALL, *Manager*

George Eulo was reported correctly in the February issue as having been named vice-president in charge of sales, Magnex Corp., Jamaica, N. Y., but the announcement, through a typographical error, stated that the firm "produced" oilburner ignition transformers, creating the impression that their manufacture had been discontinued. Magnex is now making a complete line of transformers and markets them to manufacturers of original equipment and also for replacement in the field.

WHERE VIKING PUMPS LEAD ... OTHERS FOLLOW!



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Solves problem installations involving long fill pipes, multiple tanks, vent pipes distant from fill pipes, or neighborhoods too noisy to hear audible signal.

Let the
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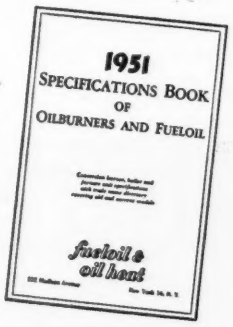

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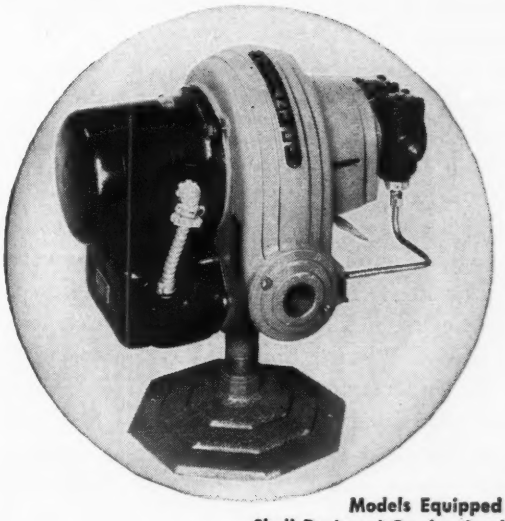

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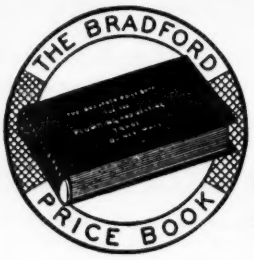

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Serving the Plumbing & Heating Trades, over a 1/3 of a century

Final Ideas from the Contest

(Begins on page 64)

to end chances of leaks. All the air is forced through the register. No air wipes the wall. No more black streaks appear."

Edward C. Snyder, 407 Tenth Ave., Haddon Heights, N. J., came along with this idea, useful to men who install copper tubing for water lines and hot water type heating systems, and of course got his check in the mail for it.

"No doubt, on some jobs you get water leaks," Edward Snyder starts out. *"When everything seems complete and just dandy, you turn on the water to test your joints and fittings. Lo and behold, drip, drip! Yep, a leak.*

"Now this can mean shutting off the water, drying out the fitting, and wasting 20 minutes to make certain the fitting is dry. You wait because if you don't you just have to do the job all over again.

"Here's my time-saver trick. When you find yourself face-to-face with a leak, turn off the water, and open a spigot somewheres to drop the pressure quickly and drain out as much water as runs out easily. Unsweat the fitting that's leaky.

"Then you remove the crust from a slice of bread. Break the slice in half. Put one piece into one side of the tubing where the fitting goes, and the other piece in the other side. Of course, each piece of bread acts like a sponge. Re-sweat the fitting in place, turn on the water pressure, and the bread will be forced out of a spigot. This is a big time saver, and works out very satisfactorily."

The oil company he works for renders its fueloil customers the service of informing them at the end of each heating season the number of gallons of fueloil they used for the season, points out Henry P. Eldredge, Rocky Hollow Road, East Greenwich, Rhode Island. At the same time, the customers are told how many gallons they used for the previous heating season. Here are parts of Henry Eldredge's interesting entry:

"In our office, the fueloil year starts on June 1st and ends on May 31st, and we keep a record of oil delivered to each account. Three years ago, at the end of the heating season, we mailed each of our customers a record of the number of gallons of fueloil delivered that season, and also the number of gallons delivered the previous season.

"We have observed each year that an increasing number of our customers have inquired about their fueloil consumption.

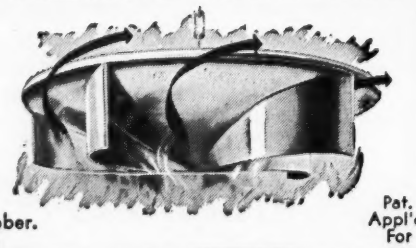
"Although meter-printed delivery slips are left with each customer, it is seldom that he takes the trouble to save the slips and figure his yearly consumption.

"We find that our mailing of the record of deliveries serves three purposes. It creates good will between our company and the customer. It follows the mailing of fueloil and service contracts and serves as a reminder for the customer to return these. It often brings to the attention of the customer a fuel-wasting condition that has developed and which needs attention, and in some instances it has led to the sale of replacement equipment."

DON'T JUST BAFFLE! GET SWIRLING ACTION TOO-

Every Conversion needs a FIRE-SWIRL BAFFLE.

Get the facts, clip this to your letterhead, or see your jobber.



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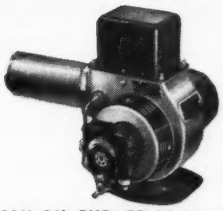

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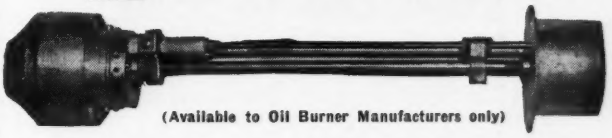

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The Shell Designed Head's proven fuel-saving feature gives you a powerful selling advantage over competition with ordinary equipment. Sell the best!

MODERN DIE & MACHINE CO.
166 Pleasant St. Boston 25, Mass.

And there you have it! The grand prize winners announced in the October issue and the supplemental winners shown in this issue and last November all have been rewarded for their efforts.

Within the next few months we'll be announcing a new Contest that will be a good bit different from the last two we've conducted. This time we're working out plans to present a list of questions and award prizes for the best solutions to the problems contained therein.

Oilheating Trends

(*Begins on page* 12)

gardless of its size. One company has year end rebates starting at .25¢ for 5,000 gallon users, then .5¢ up to 10,000 gallons, 1.0¢ up to 15,000 gallons, and 1.25¢ over 15,000 gallons.

In the Mid-Atlantic area we find about 1 in 7 of the fueloil distributors making a penalty charge for drops under 200 gallons. These penalties range from .3¢ to 1.0¢, most of them being one cent. Then we find about 1/6 of the companies dropping their price between the 201-300 gallon bracket and the 301-400 bracket. In each reported instance the drop was .5¢. Next we found about 6% of the companies dropping the price between the brackets 301-400 and 401-600. The reduction between these brackets ranged from .2¢ to 1.0¢. In the final bracket, 601-1000 gallons we find about 20% of the companies taking a drop ranging from .2¢ to 1.0¢, with the emphasis on .5¢. It is important to notice that the individual companies do not make successive reductions from bracket to

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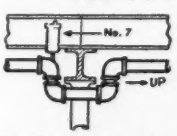
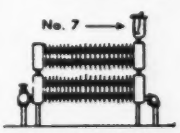


Venting trapped mains and circulating lines



Venting convector radiators

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bracket but as a rule they make their cut at just one of the points.

Like the New England fueloil distributors those in the Mid-Atlantic area also have some special discount arrangements. The most common form is the year-end rebate where the total purchase exceeds a stated amount.

About one-sixth of the companies use this method. One company drops a half cent for all users over 2,000 gallons. The more common arrangement is one half cent rebate for users of 10,000 gallons and up. An occasional marketer has a graduated scale of rebates like the one New England marketer previously mentioned. A special plan used by one reporting company allows ½ cent discount to any user of 5,000 gallons or more providing he has a 1,000 gallon tank.

In the Midwest we found 9% of the companies charging a penalty for small drops, usually under 150 gallons. The typical penalty was .5¢. Then we found just an occasional company showing a price differential between the 201-300 and the 301-400 gallon brackets. About one-fifth of the reporting companies had a price drop between the 301-400 and the 401-600 brackets, this ranging from .5¢ to .8¢, mostly .5¢. Going to the still larger tanks only one Midwest company reported a price reduction for drops 601 to 1000 gallons. This is a 1¢ drop.

We come into transport deliveries more in the Midwest. Several companies make real reductions where the consumer has a tank big enough to take 4,000 gallon drops. These of course are commercial accounts and the price reduction runs as high as 2.0¢. An occasional Midwest company establishes a price penalty of .5¢ for drops under 100 gallons.

In the Pacific Northwest price differentials between drop sizes or between tank sizes are quite common. Most of the companies in the larger cities make the break between the 301-400 gallon and the 401-600 gallon brackets. In other words, consumers in that section either have 290 gallon tanks or 675 gallon size with few exceptions. In the Oregon cities the oil price difference between the two types of customers is .5¢. In Washington it ranges between .9¢ and 1.1¢.

Going over this whole study we find only 18% of the reporting fueloil distributors who make no price concessions of any kind for any type of customer.

In the kerosene—No. 1 oil part of this study there were fewer companies reporting from each section so we will not attempt to separate the findings by geographic areas. Anyway, the pricing considerations on this product are much the same in any part of the country. Here we find slightly more than half of the companies charging a premium for drops under 100 gallons. These premiums or penalties range from .5¢ to 2.0¢. The average differential among these companies was .85¢.

Then we find 27% of the reporting companies making a price break between the 101-200 bracket and the over-200 gallon bracket. These differentials range from .2¢ to 1.1¢ with nearly all of them at the .5¢ level. Some

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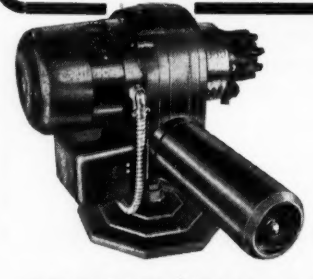

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THE RAJAH CO. BLOOMFIELD, NEW JERSEY

. . . . Oilheating Trends dealers in this light product sell to stores at .5¢ discount. We find an occasional one having another bracket above the one that we listed and showing a discount, usually .5¢, over 300 gallons.

As in the case of the No. 2 oil marketers we find only a few of the Kero.-No. 1 distributors changing their prices between each of the three brackets . . . actually 12% do this. About 1 in 8 of the companies in this group sell at a uniform price in all brackets; all of the others make some changes.

FUELOIL STOCKS: Stocks of distillate fuels at terminals, refineries, and in transit East of the Rockies on February 9, were 52,923,000 barrels. This compares with 42,692,000 a year ago or a rise of 24%. However, the improvement is not uniform throughout the area. East coast stocks on February 9 were 18,149,000 barrels compared with 17,344,000 barrels, a rise of only 5% above last year. This is too tight a situation considering that we have 11% more burners operating, and that last winter was considerably warmer than normal. The East coast would have run into a serious shortage because of the very high tanker rates were it not for the action of 12 large suppliers in promising the Government that they will bring in an additional 3,000,000 barrels to serve the public interest. The companies doing this will lose nearly 2 cents a gallon because of uncontrolled tanker rates. The shortage threat has been removed by this action.

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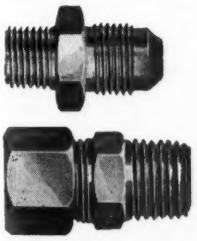

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- submerged tankless copper coil for year 'round domestic hot water
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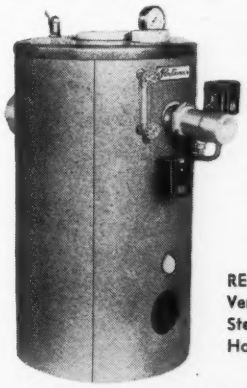

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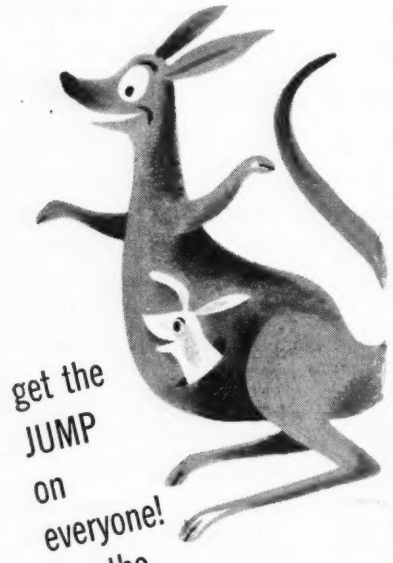
Miles W. Burleson has been appointed assistant manager, Insulation Dept., Johns-Manville Industrial Products Division, New York 16, N. Y. Burleson joined Johns-Manville in 1936 as assistant engineer for the company's Industrial Products Division at Chicago. Subsequently, he became district engineer and Chicago district assistant staff manager for insulations. In 1950 he was transferred to division headquarters in New York city, where he had been a staff member in the insulation department.



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DEGREE DAY TABLES

ONE MONTH ONLY — January						SEASON TO DATE (Sept. 1 to Jan. 31)			
Normal	1951	1952	Percent Change*		Normal	1951	1952	Percent Change*
1267	1204	1205	— 4.9	Albany	3688	3724	3896	+ 5.6
662	620	479	— 27.6	Atlanta	1837	1989	1649	— 10.2
922	806	755	— 18.1	Baltimore	2569	2405	2284	— 11.1
1101	953	997	— 9.4	Boston	3188	2799	2959	— 7.2
1220	1124	1122	— 8.0	Buffalo	3604	3548	3605	+ 0.2
1219	1196	1105	— 9.3	Chicago	3454	3537	3578	+ 3.6
1009	902	840	— 16.7	Cincinnati	2901	2847	2642	— 9.0
1141	1061	975	— 14.5	Cleveland	3315	3313	3115	— 6.0
596	572	349	— 41.4	Dallas	1540	1495	1281	— 16.8
1026	1094	853	— 16.8	Denver	3298	2918	3284	— 0.4
1326	1380	1345	+ 1.4	Des Moines	3750	3954	4246	+ 13.2
1228	1148	1092	— 11.8	Detroit	3597	3605	3568	— 0.8
1249	1197	1138	— 8.9	Grand Rapids	3705	3667	3739	+ 1.0
1146	1046	1053	— 8.1	Hartford	3363	3175	3265	— 2.9
1337	1487	1620	+ 21.1	Helena	4417	4739	5324	+ 20.7
356	358	157	— 55.9	Houston	876	893	642	— 26.7
1104	1048	943	— 14.6	Indianapolis	3157	3292	3060	— 3.1
1083	1057	959	— 11.4	Kansas City	2960	2983	3113	+ 5.1
276	298	371	+ 34.4	Los Angeles	659	518	822	+ 24.7
931	881	792	— 14.9	Louisville	2608	2749	2560	— 1.8
1329	1434	1293	— 2.7	Milwaukee	3844	4241	4235	+ 10.1
1597	1721	1629	+ 2.0	Minneapolis	4602	4919	5053	+ 9.8
319	236	145	— 54.5	New Orleans	294	813	618	— 22.1
1025	877	880	— 14.1	New York	2884	2581	2574	— 10.7
1287	1380	1320	+ 2.5	Omaha	3597	3787	4130	+ 14.8
962	848	817	— 15.1	Philadelphia	2661	2524	2408	— 9.5
1043	911	858	— 17.7	Pittsburgh	3071	3008	2777	— 9.6
1296	1220	1280	— 1.2	Portland, Me.	3898	3811	4055	+ 4.0
775	758	842	+ 8.6	Portland, Ore.	2451	2225	2498	+ 1.9
1103	929	950	— 13.8	Providence	3260	2791	2864	— 12.1
830	817	704	— 15.2	Roanoke, Va.	2442	2642	2458	+ 0.6
999	981	836	— 16.3	St. Louis	2728	2964	2771	+ 1.5
1084	1045	1078	— 0.5	Salt Lake City	3308	2874	3404	+ 2.9
464	450	519	+ 11.8	San Francisco	1394	1155	1528	+ 9.6
1573	1563	1465	— 6.8	Sault Ste. Marie	4806	4901	5033	+ 4.7
765	758	774	+ 1.1	Seattle	2577	2329	2516	— 2.3
1185	1147	1053	— 11.1	Toledo	3463	3698	3553	+ 2.6
929	774	750	— 19.2	Washington	2654	2407	2274	— 14.1

*Compared with normal.